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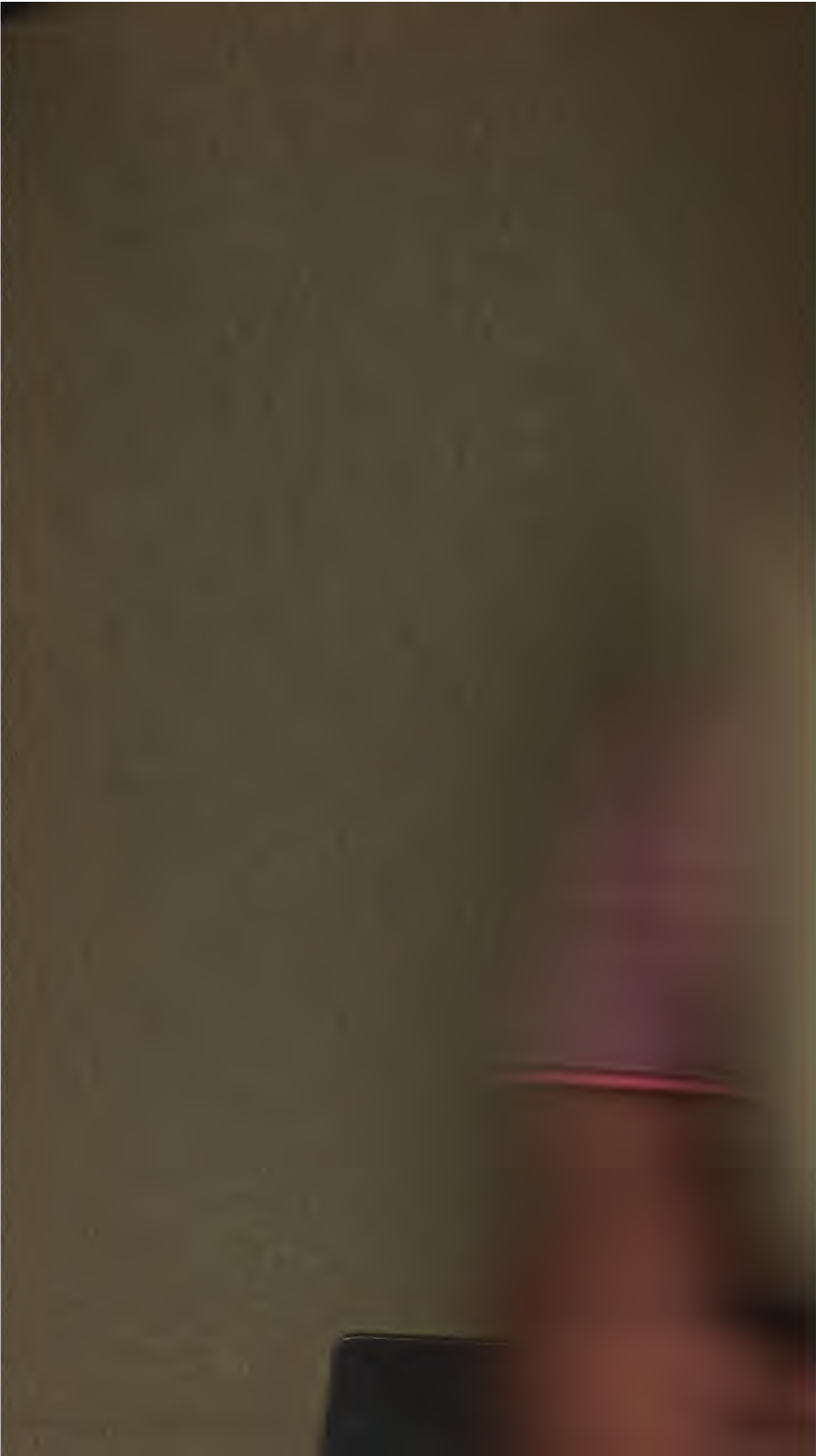
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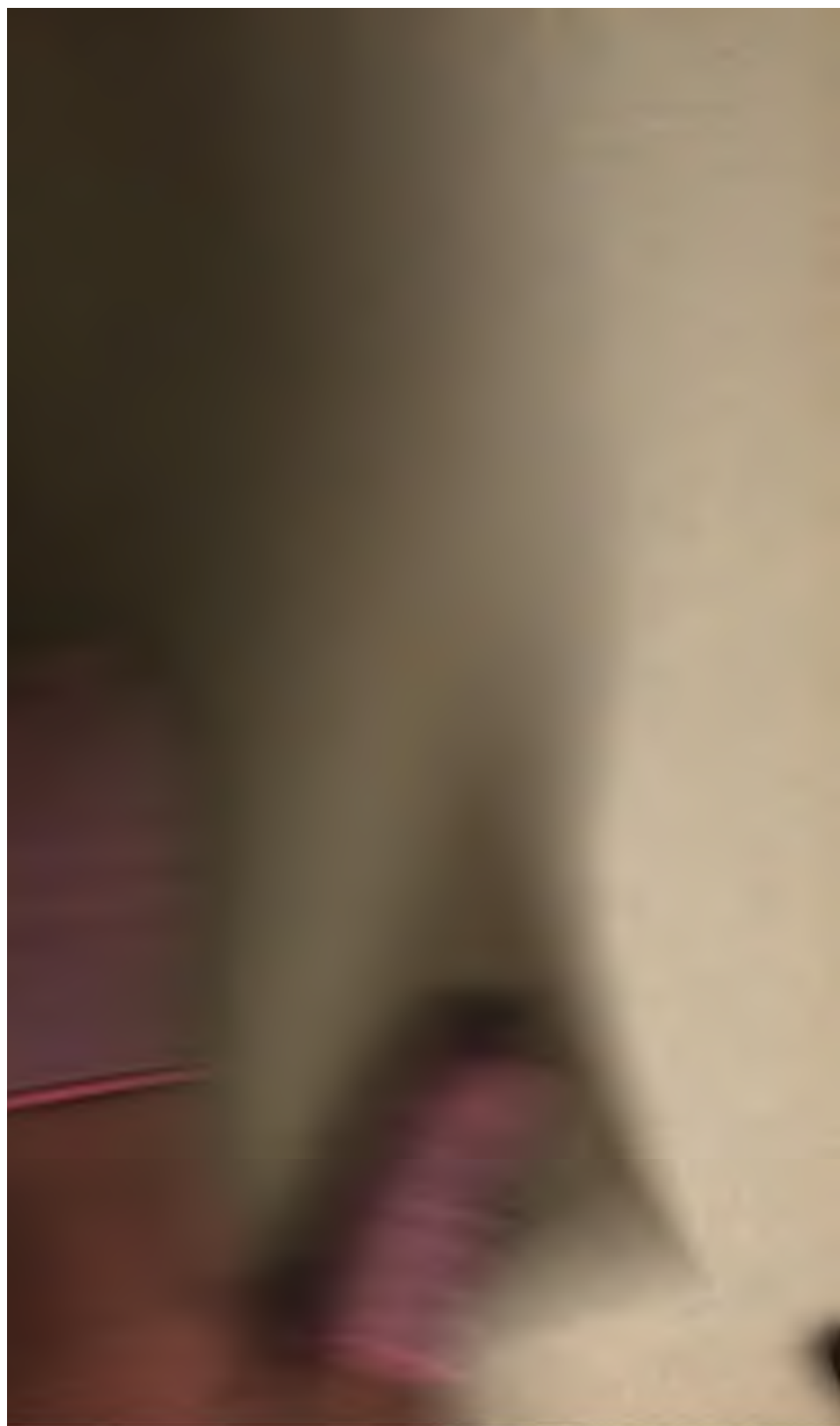
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—REPORT—

OF THE

QUICKSILVER MINING CO.

FOR THE YEAR ENDING APRIL 30th,

1887.

VHT



THE

Quicksilver Mining Company.



ANNUAL REPORT,

(With Tables and Tabular Statements,)

SUBMITTED AT THE

Annual Meeting of the Stockholders,

Held in New York, June 1887.



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DIRECTORS AND OFFICERS

OF THE

Quicksilver Mining Company.

CHARTERED BY THE STATE OF NEW YORK.

Elected June, 1887.

PRESIDENT.

DAVID MAHANY.

VICE PRESIDENT.

GEORGE W. BUTTS, JR.

DIRECTORS.

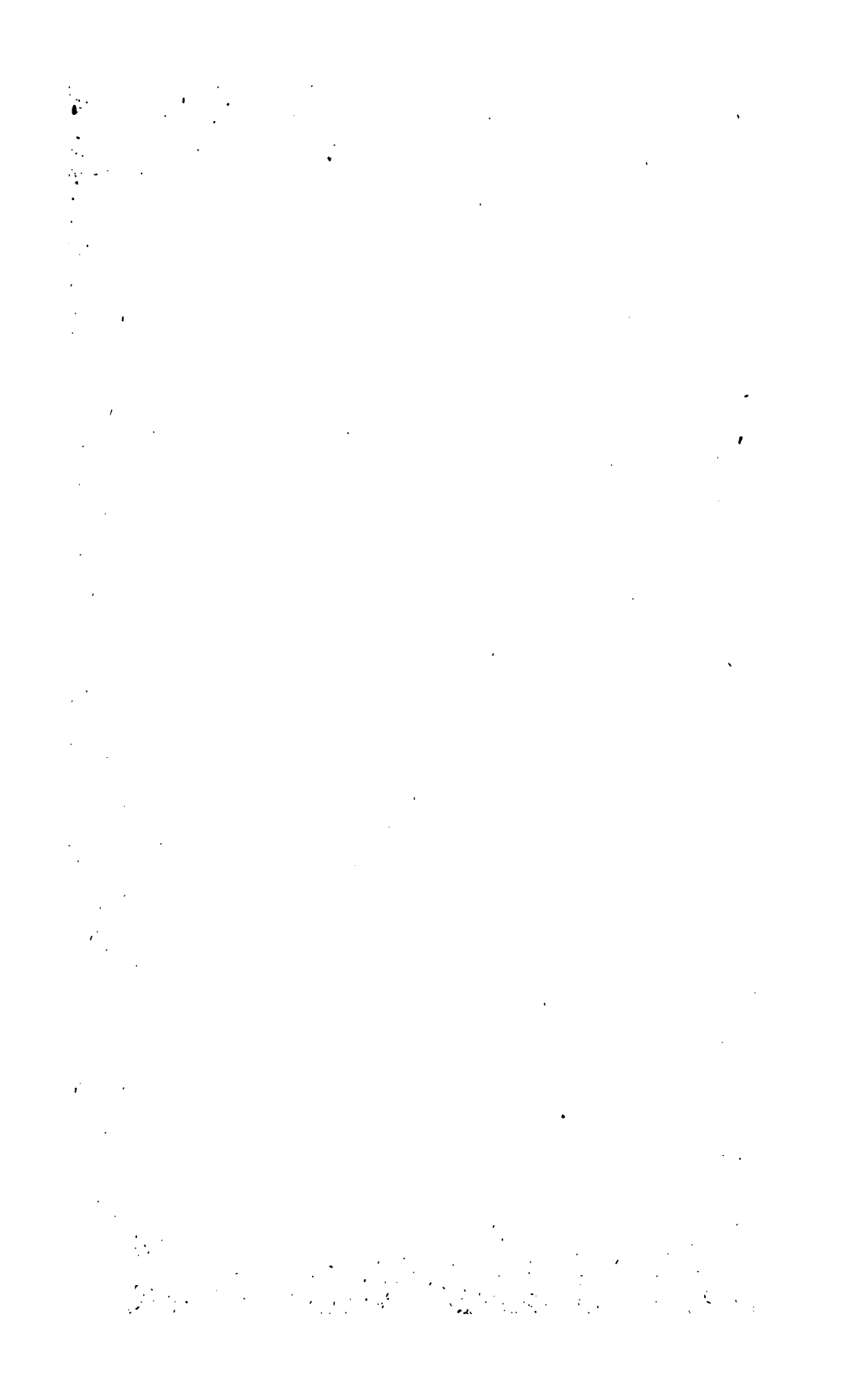
DAVID MAHANY,.....	New York.
GEORGE W. BUTTS, JR.....	Providence, R.I.
JAMES D. SMITH.....	New York.
EDWARD BRANDON.....	"
SAMUEL W. BOOCOCK.....	"
CHARLES FRIES.....	"
F. N. LAWRENCE.....	"
SHEPPARD GANDY.....	"
FRANK K. STURGIS.....	"
GEORGE G. HAVEN.....	"
JOSEPH MILBANK.....	"

TREASURER.

F. N. LAWRENCE.

SECRETARY.

M. M. WEED.



The Quicksilver Mining Company.

(For the year ending April 30 '87)

The PRESIDENT'S REPORT *Says;*

To the Stockholders of The Quicksilver Mining Co.

GENTLEMEN:

In submitting my annual Report of the condition of your Company, it gives me great pleasure to be able to congratulate you upon the results of our operations for the year ending April 30th, 1887.

(The production of Quicksilver by your Company during the year just closed varies but little from that of the preceding year. But as the percentage of cost has been considerably reduced, while the price ob-

ver

tained for Quicksilver has markedly increased, the resulting change in the year's net earnings is very satisfactory.

While some of our prospecting on the lower levels has proved disappointing, and has consequently been abandoned, yet we have been more than compensated for this loss by the discovery of richer and larger ore bodies at a much less depth, and which can consequently be worked at a much lower cost.

11 The completion of two Rail Roads into the heart of our estate, the enhancement of the value of our agricultural lands consequent thereupon, while at the same time, a large saving in the transportation is made, are matters for congratulation.

Under the present vigorous and able management at the Mines it seems scarcely necessary to tell you that every part of the property, mines and machinery is maintained in the highest state of efficiency.

The Financial condition is such as to fully justify the hopes expressed by me in my last Annual Report. This condition is fully shown in the Statement of Business and Balance Sheet presented herewith, and I trust the same will be carefully scrutinized by every stockholder.

I earnestly invite your attention to the full Re-

ports and accompanying Tables furnished by the Manager and by the Superintendent at the Mines. They are full and clear, and leave little excuse for ignorance concerning either the property or its management.

All of which is respectfully submitted.

DAVID MAHANY,

President.

over to 9-

MONTHLY PRODUCTION OF QUICKSILVER,

FROM MAY 1st, 1886, TO APRIL 30th, 1887.

1886.

May	1600	Flasks.
June	1806	"
July	1572	"
August	1240	"
September	1210	"
October	1280	"
November	1900	"
December	2083	"

1887.

January	1904	"
February	1700	"
March	1584	"
April	1671	"

Total..... **19,550** **Flasks.**

NEW ALMADEN, CALIFORNIA,

May 21st, 1887.

*To the President and Board of Directors
of the Quicksilver Mining Company, New York:*

GENTLEMEN:

In presenting my seventeenth Annual Report, it gives me pleasure to inform you that the operations of your business under my charge for the fiscal year ending April 30th, 1887, show more favorable results than they did for the preceding year, the net earnings being \$178,448 10, against \$32,957 20.

the The following statement exhibits the earnings and expenses of ~~your~~ mines and works from the first day of May, 1886, to the thirtieth day of April, 1887.

EARNINGS.

From 19,550 flasks of Quicksilver produced average value \$36.45 per flask...	\$712,634 80
" Rents.....	28,937 56
" Miscellaneous.....	572 28
Total earnings.....	\$742,144 44

EXPENSES.

For Mine Pay Rolls.....	\$318,736 86
" Hacienda Pay Rolls	55,515 77
" Miscellaneous and Taxes	26,882 94
" Supplies consumed for current operations of Mines & Furnaces, 133,808 44	
Total Expenses	\$534,943 81
Difference.....	207,200 08
Less: decrease in Ore account at Furnaces	28,752 58
Net Earnings.....	\$178,448 10

(over)

The total Cash receipts and disbursements for the same period were as follows :

RECEIPTS.

From Quicksilver sales.....	\$620,276	80	
" Miscellaneous.....	29,509	64	
			<u>\$649,786 44</u>
Cash on hand April 30th, 1886.....			50,132 61
			<u>\$699,918 95</u>

DISBURSEMENTS.

For Supplies.....	\$138,274	14	
" Pay Rolls.....	374,252	43	
" Miscellaneous and Taxes.....	26,882	94	
" Legal Expenses.....	1,517	00	
			<u>\$540,926 51</u>
Difference.....	\$158,992	44	

This difference is accounted for as follows :

Remitted to New York Office	\$138,971	89	
Cash on hand April 30th, 1887....	25,020	80	
			<u>\$163,992 69</u>
Together making as above.....	\$158,992	44	
The balance to the credit of property accounts per last report was.....	\$233,731	57	
Adding the net earnings for twelve months.....	178,448	10	
			<u>\$412,179 67</u>
There is to be accounted for.....	\$412,179	67	

The credit balances on the 30th April, 1887, were :

Quicksilver.....	\$186,375	00	
Supplies.....	52,414	42	
Ore.....	12,880	81	
Cash.....	25,020	60	
			<u>\$276,690 83</u>

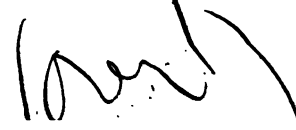
Credit balances brought forward.....	\$276,690 83
Add disbursements not charged to working account as follows :	
Legal expenses.....	\$1,517 00
Remittances to New York Office.....	133,971 84
And the account is balanced for.....	<u>\$412,179 67</u>

Comparisons with the preceding fiscal year exhibit the following changes: the total earnings were \$742,144 ~~44~~ against \$631,905 ~~90~~, an increase of \$110,238 ~~04~~. The total expenses were \$563,696 ~~84~~, against \$598,948 ~~79~~, a decrease of \$35,252 ~~86~~; the net earnings \$178,448 ~~10~~ show an increase of \$145,490 ~~00~~.

The average per centage yield of all ore worked was $1\frac{2}{100}\%$, an increase of $\frac{10}{100}$ per cent.; the production of Quicksilver 19,550 flasks, was a decrease of 450 flasks, and the sale fell off from 23,813 flasks at an average price of \$29.50^c for the preceding year to 17,429 flasks, at an average of \$35.59; the sales decreased 6,384 flasks and the average price increased \$6.08^c.

The actual cost per flask of Quicksilver produced (including \$96,232 69 for labor in prospecting, average \$4.92 per flask) was \$27.32 against \$23.86 (including for prospecting \$103,456 19, average \$5.17 per flask); per flask the actual cost was decreased \$1.54 and prospecting cost decreased \$0.25. The quantity of ore produced and roasted 36,441 tons and 38,194 tons, shows a decrease in the first of 1,772 tons, and in the second of 2,934 tons, while the work done in drifting and sinking 11,738 feet—about $2\frac{2}{100}$ miles, was an increase of 1,031 feet.

These returns prove that the work has been prosecuted with vigor and success, although the ore returns have not fully met our expectations.



All the property at New Almaden is in good order and except that a new boarding house must soon be built, the houses, furnaces and machinery are ample for all requirements.

The Company's agricultural lands have been increased in value by the construction and operation of two branch railways, giving direct connection with San Jose and San Francisco. Both roads terminate on your lands, one depot being 2¹/₂ miles, and the other 3 miles distant from the furnaces at the Hacienda. By a favorable contract for two years with one of these roads I have effected a saving in costs of transportation of from \$12,000 to \$15,000 per year.

((The production of Quicksilver in California, as all the world over, continues to decrease and no new deposits are discovered worth working. At the same time many new mines of gold and silver are being discovered and operated, thereby increasing the demand for Quicksilver. These two forces tending to a natural increase in its price are aided by a larger consumption in other directions, and by new uses.))

During the past year Quicksilver has been shipped hence to New York at very favorable rates, ranging from \$10.00 to \$16.50 per ton, since the Inter-State Commerce Bill went into effect the Railroads have advanced their rate to \$44 per ton and the Pacific Mail line to \$35 per ton (to which add marine insurance cost.) We will consequently be at a great disadvantage in future in making shipments to New York, where our product comes into competition with the foreign article shipped from Europe at low rates of freight.

The position of the metal in London is much improved as the stock has been considerably reduced and all in first hands there, in New York and San Francisco it is barely

sufficient to supply the ordinary demand for 6 months. The price in London however, has declined from £7.10 in December last to £6.17.6 per flask, at present writing, ^(May) owing to the fact that disappointed outside speculators are parting with their holdings below the official quotation, and they now prevent the improvement in price.

The detailed statements and tables sent to you herewith will supply further information relating to your property, works and mines.

I also send to you the interesting report of Mr. Hennen Jennings, Superintendent, on the mining work for the year May 1886 to May 1887, and I commend it to your careful perusal.

In conclusion I desire to acknowledge the faithful support I received from the Company's officers and employees in California during the past year, and I thank them for the efficient manner in which they have performed their work.

Your obedient servant,

J. B. RANDOL,

Manager.

over to 45

EARNINGS AND EXPENSES

FROM MAY 1st, 1886. TO APRIL 30th. 1887.

From :

19,550 flasks of Quicksilver, averaging
\$36,45 per flask.....\$712,634 80

17,429 flasks sold at an average
of \$35,59,..... \$620,276 80

Less :

2,849 flasks product of previous
12 mos. unsold April 30th
1886, then valued at \$33,
each, and now counted
sold at that rate.....\$94,017

Leaving :

14,580 flasks of product for 12
mos. ending April 30th,
1887, sold at \$36,09⁵ avg. \$526,259 80

3,443 flasks are consigned abroad
valued at \$37,50.....129,112 50

1,527 flasks are in California,
valued at \$37,50 57,262 50 \$186,375 00

19,550 flasks Quicksilver, av'ge
value \$36,45..... 712,634 80
Rents.....28,937 36
Miscellaneous 572 28

Total Earnings.....\$742,144 44

Total Earnings.....brot. forward, \$742,144 44

EXPENSES.

Mine Pay Rolls.....\$318,736 66

Hacienda Pay Rolls..... 55,515 77

Miscellaneous and Taxes..... 26,882 94

Supplies consumed for current operations at Mines and Furnaces,.....133,808 44

Total Expenses.\$534,943 81

Difference207,200 63

Less:

Decrease in Ore on hand at Furnaces.....28,752 53

Net Earnings.....\$178,448 10

**Actual Expenses per Flask of Quicksilver Produced from
May 1st, 1886, to April 30th, 1887.**

Production in flasks of 76½ lbs.....	19,550
Mine Pay Roll	\$318,736 66
Average per flask, \$16,30¹.	
Hacienda Pay Roll.....	55,515 77
Average per flask, \$2,84.	
Pay Rolls together.....	\$374,252 43
Average per flask, \$19,14¹.	
Mine Supplies.....	\$90,278 40
Average per flask, \$4,61².	
Hacienda Supplies.....	\$43,530 04
Average per flask, \$2,22².	
Miscellaneous and Taxes.....	\$26,882 94
Average per flask, \$1,37².	
Total.....	\$534,943 81
Average per flask. \$27,36.	
Less :	
Rents and Miscellaneous....	\$29,509 64
Average per flask, \$1,51.	
	\$505,434 17
Total Average per flask, \$25,85.	
Add :	
Decrease in Ore on hand at Furnaces.....	\$28,752 53
Average per flask, \$1,47.	
	\$534,186 70
Making net cost average per flask	\$27,32
In the Mine Pay Rolls (\$318,736 66) there is in- cluded for labor on dead work and prospect- ing.....	\$96,232 69
Average per flask, \$4,92³.	

ACCOUNT OF SUPPLIES,

From May 1st, 1886 to April 30th, 1887.

The changes in Supplies have been as follows :

Balance, April 30th, 1886.....	\$47,948 72
Purchased during 12 months ending April 30th, 1887	\$140,772 04
Less Sales... ..	2,497 90
	<hr/>
	138,274 14
	<hr/>
	\$186,222 86

Consumed for general operations :

At the Mines.....	\$90,278 40
At the Hacienda.....	43,530 04
	<hr/>
	\$133,808 44

Balance, April 30th, 1887.....	\$52,414 42
	<hr/>
	\$186,222 86

MEMORANDUM OF PRINCIPAL SUPPLIES
ON HAND APRIL 30th, 1887.

Candles and Oils.....	\$392 36
Coal.....	15,896 20
Flasks.....	7,684 21
Iron, Steel and Hardware	3,046 91
Lumber and Timber.....	11,420 82
Lagging.....	606 32
Powder and Fuse.....	450 37
Wood.....	11,900 54
	<hr/>
	\$51,397 73
Balance, minor items.....	1,016 69
	<hr/>
Total.....	\$52,414 42
	<hr/>

PRODUCTION OF QUICKSILVER
IN CALIFORNIA FOR THE YEAR ENDING DECEMBER 31st, 1886.

MINES.	1885. Flasks.	1886. Flasks.	Flasks.
Guadalupe	35		35 Decrease.
Napa Cons.....	2,197	1,769	428 "
Great Western	3,469	1,949	1,520 "
Ætna.....	1,309	3,478	2,169 Increase.
New Idria.....	1,144	1,406	262 "
Sulphur Bank.....	1,296	1,449	153 "
Redington.....	385	409	24 "
Great Eastern.....	446	735	289 "
Various.....	392	786	394 "
	10,673	11,981	1,308 Increase.
New Almaden....	21,400	18,000	3,400 Decrease.
Total Flasks.....	32,073	29,981	2,092 Decrease.

PRODUCTION.	OUTSIDE MINES.	NEW ALMADEN.	TOTAL FLASKS.
1880	36,461	23,465	59,926
1881	34,791	26,060	60,851.
1882	24,662	28,070	52,732
1883	17,725	29,000	46,725
1884	11,913	20,000	31,913
1885	10,673	21,400	32,073
1886	11,981	18,000	29,981

TOTAL EXPORTS OF QUICKSILVER FROM SAN FRANCISCO.

FOR THE YEAR ENDING DECEMBER 31st, 1886.

To	1885 Flasks.	1886 Flasks.	Flasks.
China.....	233		233 Decrease.
Japan.....	302	3	299 "
Mexico.....	5,884	5,530	354 "
South America....	100		100 "
Central America.....	9	23	14 Increase.
New Zealand.....	100	91	9 Decrease.
New York.....	9,055	600	8,455 "
Various.....	47	54	7 Increase.
By Sea.....	15,730	6,301	9,429 Decrease.
Overland by Rail	10,000	10,000	
Totals.....	25,730	16,301	9,429 Decrease.

Year.	Total Production Flasks.	Total Exports Flasks.	Balance for Home consumption on Pacific coast and Stock.
1880	59,926	46,294	13,632 Flasks.
1881	60,851	45,799	15,052 "
1882	52,732	40,417	12,315 "
1883	46,725	57,867	8,858 "
1884	31,913	21,901	10,012 "
1885	32,073	25,730	6,343 "
1886	29,981	16,301	13,580 "

NEW ALMADEN,
May 15th, 1887.

J. B. RANDOL, Esq.,

Manager.

DEAR SIR :

I herewith send you the customary annual tabular statements for the mines and works under your charge, all for fiscal year beginning May 1st, 1886 and ending April 30th, 1887.

The regular monthly reports and statements have carefully chronicled all the main details of the past year's operations in the various departments, and I shall now confine myself to a brief summary :

It is seen from the tabular statements that the total amount of material extracted from the various shafts and tunnels amounts to 108,699,47 tons, a decrease of about 20,000 tons, as compared to the previous year. This amount can be divided as follows :

From ore chambers,.....	64,243,22 tons,
“ dead-work and prospecting, ..	44,456,25 “

108,699,47

The material from the ore chambers of the principal workings netted but 29,490,40 tons of productive ore. The total amount of ore of all descriptions shipped to Hacienda is seen to be 36,441,37 tons, consequently the amount taken from surface workings and old mine, &c., 6,950,97 tons, a considerable increase of this class of low grade ore as compared with the previous year.

The amount of ore of all descriptions reduced by the furnaces was 38,194.10 tons: a decrease of nearly 3000 tons; as compared with the previous year, the yield however, from this ore was 19,550 flasks Quicksilver, only 450 flasks short of the corresponding previous year, giving 1.957 per cent. Quicksilver for ore produced.

The last four months of this fiscal year a marked improvement in the grade of the ore is observed, as the per centage has been 2.45. The yield for the corresponding period last year was only 1.587 per cent. The high per centage of the past four months is in a measure attributable to the better quality of the ore being taken out of our new ore chambers.

ORE CHAMBERS.

As heretofore the Randol Shaft has proven to be the main ore producer of the mine, producing twice as much ore as all the other mines put together.

The extraction of ore has been carried on during the year in 30 different places, situated as follows:

18	from Randol Shaft,
4	" Santa Isabel Shaft,
2	" San Pedro "
2	" America, "
2	" Day Tunnel, "
1	" Washington, "
1	" Old Mine, "

At present ore is being extracted at 18 points as follows:

14	from Randol Shaft,
2	" Santa Isabel,
1	" Washington,
1	" Old Mine.

Of the 30 places worked where ore was extracted during the year the tribute system was employed at 24 of them, and footage at 6.

In my last report I mentioned that 1000 Randol Labor XLIII had been our main ore chamber for that year, but by September last the main body of the ore was worked up to the 900 ft. level, and since that time only tributers have been at work taking out ore at parts overlooked or left as pillars. One cause of the decrease in amount of timber used this year, as compared to last, is the comparative exhaustion of this ore chamber as it required more timber while actively worked than any known similar excavation in the history of the mine. The ore on the 900 Randol proved disappointing, but some is still found in a narrow chute going upward, and worked by tributers and now extends even above the 800 level. There is legitimate ground for hoping this ore body may improve.

The extraction of ore below the 1800 level has been most disappointing. The main ore bodies at present being worked are found on the 1500 North, and 1500 West, Randol, and also 1300 Santa Isabel. The ore on the 1500 North and 1500 West Randol is worked on the footage system by four companies of miners, comprising in all 44 men.

At present reserves are only attainable from the 1100 level, and in small quantity; and the reserves can now be considered practically exhausted; and on the whole they have proven to be very disappointing. The great number of localities worked during the year is due to the fact that the tributers seek out pillars or promising seams left in old labores and work them at their own risk. Such places will soon, however, become scarcer, as the most promising have been exhausted; and in a short time the mine will have almost wholly to depend on the recent new discoveries of ore which will be further described later on.

UNDER-GROUND DEVELOPMENT, PROSPECTING, &c.

The past year's operations with regard to prospecting shows even greater activity than the previous year, and holds the

banner in the Drifting and Sinking record, with its total of 11,738.5 feet and at 83 different points. It is a singular fact, however, that the total amount of tons of waste rock trammed is less than in 1886, as shown by Tables. This can be explained by the small size of the upper drifts and also from the fact that much waste rock was dumped in old abandoned labores connected with the Randol Shaft explorations.

This achievement can be segregated from our various mining centres as follows :

From Santa Isabel Shaft.	3227.50 feet,
" Randol " 	1636.50 "
" Buena* Vista " 	663.50 "
" America " 	1646.50 "
" Washington " 	1178.00 "
" Santa Rita " 	658.50 "
" St. George " 	237.00 "
" Day Tunnel.....	265.00 "
" Upper prospects and old workings,	1991.00 "
" Miscellaneous,.....	235.00 "

Total Feet, 11,738.50

Let us briefly take up a few of the most salient points of the past year's explorations and connect them with the above localities.

FROM SANTA ISABEL SHAFT.

In my last annual Report it was stated that the costly explorations in connection with this shaft had not yet reached their prospective localities. It is with extreme regret that I have to state that the developements on the 2200 and 2300 levels were of such a discouraging character and nature, that after exhaustive prospecting on these levels, and reaching all points aimed at, in spite of the serious difficulties, and drawbacks of swelling and treacherous ground in the cross-cuts, and large volumes of water and gas in the vein formation, that no ore was found and no justification for their continuance, so

that in November it was deemed advisable to allow the mine to fill with water to the 2200 level, and in April to 2100 level and abandon any thought of deeper exploration ; but before this was done the ore found on the South East Cross-cut No. 304 on 2100 level Buena Vista, was thoroughly prospected and found to be but a small pocket of ore with no regular downward continuation.

Prospect from this shaft on the 1400 level was attended with much more encouraging results and the relative position of the new ore body here found is much more advantageous regarding cost of extraction, and possible extent of continuance, than if it had occurred at greater depths.

In report for 1886 it was stated that some ore was found in April in the 1400 East drift ; this is marked on the Drifting Table No. 116. The ore mentioned soon gave out but a new find was made in the drift in June, extending, however, only 30 or 40 feet and not very high grade. The drift was continued until September, advancing 288 feet. A Raise T₂ was started in September on the ore found in June ; as the Raise went up, the ore was found to improve and finally developed the ore body now worked on tribute on what is termed the 1300 Santa Isabel and known as Labor XLII.

It has been slow work opening out this ore on account of poor ventilation before connection was made with the 1500 West Randol, and also of the necessity of running up a second Raise W₂ and driving a connecting drift between the two Raises. The present appearance of the ore body though narrow, is favorable, and 12 men are at work breaking ore. Another feature on this level is No. 108, 1400 West, which has been driven 851 feet in the direction of the America Shaft, with the eventual intention of unwatering the America Mine and pumping it through the Buena Vista, and also prospecting the intervening ground, which has many hopeful possibili-

ties. The drift is being actively run with the aid of machine drills, and the tramming done by mule power. It is ventilated by a suction blower driven by compressed air.

FROM BUENA VISTA SHAFT.

Prospecting from the Buena Vista Shaft has been discontinued since August; before so doing the 2300 S. E. was continued in different directions for 633½ feet, but although plenty of vein matter was met with, no signs of ore was found. So, after the pump-work was taken out this mine was also allowed to fill with water up to the 2100 level.

This total abandonment, both here and the Santa Isabel, of all deep exploration frees us from great expense, and will allow a more thorough prospecting of much promising ground on upper levels and at a very much smaller cost per running foot of drifts, winzes, &c.

An important improvement in the handling of the water from the 1400 Santa Isabel level and consequent saving in cost of pumping it through this shaft, was completed and put in operation this April; and consists in taking the water in 4 inch pipes down the Santa Isabel Shaft from the 1400 level, then through the 2100 level to the Buena Vista Shaft, then up this shaft to a tank within 490 feet of the collar where the plunger pump, taken out of the 2300 level is placed, and by which the water is pumped up to the Adit level, a lift of only 185 feet.

FROM RANDOL SHAFT.

The main discoveries made from the Randol Shaft occurred on the 1500 level. The North drift on this level was cleaned out in May and June last, and was continued further to the North East than ever before, and resulted in finding a new ore chute disconnected from all the old ones. The ore, though

low grade, and scattered, gives good return for the labor of extraction, and may improve. Encouraged by the success of the 1500 North, the 1600 North drift was also cleaned out and extended. Some ore was found, and supposed to be the downward continuation of the 1500 N. chute, but on the whole is not so extensive or encouraging as that found on the 1500 N.

To determine whether the ore found in the 1400 East, Santa Isabel, No. 116, extended downwards, the 1500 West level was cleaned out and drift 39 A extended in the direction of the supposed extension in December last. Vein and ore was struck. The vein matter has been followed for over 300 feet and disclosed promising ore for about 220 feet of this distance, with ore still in the face of the present drift. An incline connection was made with 1400 E. Santa Isabel in March, thus affording excellent ventilation to both localities, and at present there are 24 men at work on footage. This ore chute, where first struck, is 300 feet West of any other ore body before worked in the Randol Shaft.

1600 West and 1700 West are now being repaired and extended in order to determine the further downward continuance of this ore chute, and the developments they will make are awaited with eager and hopeful interest.

FROM AMERICA SHAFT.

The sinking of this shaft has been greatly retarded by the large amount of water encountered, necessitating the substitution of the Cornish system for the steam pumps. The Cornish pumps now in use were taken from the Washington Shaft where they have been idle since connection was made with the Santa Isabel Shaft.

Considerable prospecting was carried on in the upper portion of the mine, resulting in finding of some pockets of ore. On the 600 level some ore was found and seemed to indicate a downward extension, but the 700 foot level has not yet been sufficiently advanced to unwater the deposit and determine the matter.

The large flow of water found in the 500 East, in April, leads us to hope that further prospecting in this locality will be along a strong new vein formation; the water runs freely through the drain adit, without necessitating pumping. Altogether the developments from the America are at a hopeful and critical stage.

FROM WASHINGTON SHAFT.

Work from the Washington was resumed in November, a little ore has been found, but as a whole the prospects have not been very encouraging.

FROM SANTA RITA SHAFT.

Developments from this shaft proved so disappointing that in October all work from it was abandoned.

FROM ST. GEORGE SHAFT.

This shaft was started in December, its location on the surface is near the wagon road running between the Randol and Santa Isabel shafts, and is above the supposed continuation of the ore chute found in No. 116-1400 East, Santa Isabel. Work on upper continuation of which we hope better to command by this shaft than could be done by long cross-cuts from the Randol or Santa Isabel shafts.

The small engine and boiler used at the Santa Rita shaft was transferred to this point and a cheap shaft house, composed largely of the material from the Santa Rita, was erected in two weeks. During the first month's sinking a progress of 164 feet was made, the greatest depth ever sunk in *one* month, in the history of our mining operations. Since January sinking has been very slow owing to amount of water met with and the necessity of handling it with steam pumps, worked by compressed air supplied by a surface pipe from the Santa Isabel Compressor. Remunerative results are not expected from this shaft until it has reached a considerably greater depth.

FROM DAY TUNNEL.

The main Day Tunnel drift was resumed in November, in a south Easterly direction from the point at which the Santa Clara drift branches from it, a progress of 265 feet was made, for the most part along a junction of vein and alta, and some spots of good ore found, which, as yet, prove pockety, but leave hope for future improvement.

UNDER MISCELLANEOUS PROSPECTING.

Is included a drift run from Junction shaft and prospecting in the Santa Rosa and Santa Clara Mines, and developed nothing of importance.

MACHINERY, FURNACES, &c.

HILL.

The machinery at the various shafts is now all in prime condition, with the exception of the Randol Shaft. The hoisting engine at this point has been subjected to such long and severe strain that it is badly giving way and requires constant repair. If the ore bodies from the Randol continue to develop favorably a new hoisting engine will soon be required, in which case I think the hoisting engine at Buena Vista could be transferred to this point with advantage.

The pumping engine at the Buena Vista has worked most smoothly and satisfactorily during the past year, raising over 86,000,000 gallons of water. In February a nest of the Buena Vista boilers was fitted up with appliance to use "Fuel Oil" (residue from refining of Petroleum,) in the place of coal as a fuel. Some tests have been made, but further trial is still required before deciding as to the advisability of replacing coal by the oil as a constant fuel.

The large Compressor and Receiver at the Buena Vista were transferred to the Santa Isabel shaft during January.

The Santa Isabel shaft being of late more centrally located for furnishing the supply of compressed air to the various points at which it is needed.

The pumping engine transferred from the Washington to the America shaft was thoroughly over-hauled before being put in place, and now works in a most satisfactory manner.

The Roads, Planillas, Houses, &c., are all in excellent condition, and have required no unusual outlay during the past year for their maintenance.

The cars, trucks, &c., of the main Incline have undergone considerable renewal and repair and are now in excellent condition.

HACIENDA.

During the past year the furnaces, with their accompanying condenser systems, have worked in a most smooth and satisfactory manner, requiring but few repairs, changes or renewals. No case of salivation occurred about the works or were any losses detected in distillation. The furnaces roasted :

7,632,10 tons Granza,
30,562,00 " Tierras,
<hr/>
38,194,10 " Ore of all classes.

The nomenclature of Terrero was not required during the past year.

The principal renewals to the Furnace plant for this year consists of replacing the two old 30-inch wrought iron pipes, connecting No. 3 Condensers with its drying chamber, by two new ones, each 70 feet long and made of $\frac{3}{4}$ iron. Also a new "Guibal" fan was put in main flue, connected to draught system of Furnaces Nos. 3, 6, 8, 7 & 9.

A new machine for threading flasks and stoppers was added to the machine shop, and it is now an easy matter to thread and stopper 100 old flasks per day with it. By buying and

thus renewing old flasks the average cost of our flasks is only about 60 cents each. New flasks cost us about \$1.00 each, by thus substituting the use of old flasks for new ones a saving of nearly \$8,000.00 a year is made, on a production of 20,000 flasks.

To better illustrate and in a more forcible manner than by words, the condition of our surface plants, buildings, &c., I will forward you an album of Photographic views, the negatives of which were taken by our resident physician Dr. Winn.

The output of Quicksilver for the coming year will largely depend on the yield of our new ore bodies, as our old ones are nearly exhausted. The capriciousness of Quicksilver deposits is such that I can hazard no prophecy as to the value of these new discoveries ; but will state that they appear at present to be the most promising met with since my term as Superintendent.

Respectfully,

Your obedient servant,

HENNEN JENNINGS,
Superintendent.

OPERATIONS OF FURNACES,

FROM 1st MAY 1886, TO 30th APRIL 1887

Furnace No.	Time in Operation. Days.	Class of Ore Roasted.	Quantity of Ore Roasted, Tons of 2000 lbs.		Quicksilver Produced Flasks of 76½ lbs.	Quicksilver in Pounds.	Per ct. Yield.
			Tons.	Lbs.			
Continuous 1	338	Granzita	11579				
		Granza	740	1800	4180	319,770	1.29 ⁷
" 2	28	Granzita	495		220	16,830	1.70
" 3	295	Tierras	10283		2695	206,167½	1.00 ²
" 8	344	Tierras	8205		2323	177,709½	1.08 ³
" 7	271	Granza	2587	400	3593	274,864½	5.31 ²
" 9	365	Granza	3504		5012	383,418	5.47 ¹
Intermit'nt 6	39	Granza	800		1527	116,815½	7.30
Totals.....	1680		38194	200	19550	1,495,575	1.95 ⁷

Ores Roasted.....76,388,200 pounds or 38,194 $\frac{200}{2000}$ tons

Quicksilver Produced, 1,495,575 " " 547 $\frac{1575}{2000}$ "

Total product of the Mines on the Company's property from July 1850 to 30th April, 1887, 860,218 flasks or 65,806,677 Pounds.

STATEMENT

OF THE NUMBER OF TONS OF ORE OF ALL QUALITIES REDUCED, AND FLASKS OF QUICKSILVER PRODUCED AT THE NEW ALMADEN MINES FROM 1st MAY 1886, TO 30th APRIL, 1887.

MONTHS.	GRANZA.		GRANZITA AND TIERRAS.		TOTAL.		AVERAGE QUICKSILVER PER OT.	FLASKS QUICKSILVER.
	TONS.	POUNDS.	TONS.	POUNDS.	TONS.	POUNDS.		
1886								
May.....	762	800	2374	1000	3126	800	1.957	1000
June.....	837	100	2824	1000	3661	1100	1.888	1800
July.....	646	700	2020	1000	2666	1700	1.681	1672
August.....	333	1800	2043		2376	1800	1.117	1210
September.....	336	800	2830		3166	800	1.468	1210
October.....	347	1300	2030	1000	2978	300	1.408	1200
November.....	780	1800	2845		3625	1800	2.000	1000
December.....	822	1400	2031		2853	1400	2.115	2083
1887,								
January.....	668	700	2000	1000	2667	1700	2.008	1004
February.....	702	1400	1007		2209	1400	2.708	1700
March.....	602	1400	1024		2316	1400	2.018	1684
April.....	621		1788		2409		2.01	1071
	7632	200	30502		38104	200	1.967	10680

OPERATIONS OF FURNACES,

FROM 1st MAY 1886, TO 30th APRIL 1887

Furnace No.	Time in Operation. Days.	Class of Ore Roasted.	Quantity of Ore Roasted, Tons of 2000 lbs.		Quicksilver Produced Flasks of 76 lbs.	Quicksilver in Pounds.	Per ct. Yield.
			Tons.	Lbs.			
Continuous 1	338	Granzita	11579				
		Granza	740	1800	4180	319,770	1.29 ⁷
" 2	28	Granzita	495		220	16,830	1.70
" 3	295	Tierras	10283		2695	206,167 $\frac{1}{2}$	1.00 ²
" 8	344	Tierras	8205		2323	177,709 $\frac{1}{2}$	1.08 ³
" 7	271	Granza	2587	400	3593	274,864 $\frac{1}{2}$	5.31 ³
" 9	365	Granza	3504		5012	383,418	5.47 ¹
Intermit'nt 6	39	Granza	800		1527	116,815 $\frac{1}{2}$	7.30
Totals.....	1680		38194	200	19550	1,495,575	1.95 ⁷

Ores Roasted.....76,388,200 pounds or 38,194 $\frac{200}{2000}$ tons

Quicksilver Produced, 1,495,575 " " 547 $\frac{1575}{2000}$ "

Total product of the Mines on the Company's property from July 1850 to 30th April, 1887, 860,218 flasks or 65,806,677 Pounds.

STATEMENT

OF THE NUMBER OF TONS OF ORE OF ALL QUALITIES REDUCED, AND FLASKS OF QUICKSILVER PRODUCED AT THE NEW ALMADEN MINES FROM 1st MAY 1886, TO 30th APRIL, 1887.

MONTHS.	GRANZA.		GRANZITA AND TIERRAS.		TOTAL.		AVERAGE QUICKSILVER PER CT.	FLASKS QUICKSILVER.
	TONS.	POUNDS.	TONS.	POUNDS.	TONS.	POUNDS.		
1886								
May.....	752	800	2374		3126	800	1.957	1600
June.....	837	100	2824	1000	3661	1100	1.886	1806
July.....	646	700	2929	1000	3575	1700	1.681	1572
August.....	333	1800	2943		3276	1800	1.447	1240
September.....	336	800	2836		3172	800	1.458	1210
October.....	347	1300	2930	1000	3278	300	1.493	1280
November.....	780	1800	2845		3625	1800	2.00	1900
December.....	822	1400	2951		3773	1400	2.111	2083
1887,								
January.....	668	700	2909	1000	3577	1700	2.036	1904
February.....	792	1400	1607		2399	1400	2.709	1700
March.....	692	1400	1624		2316	1400	2.616	1584
April.....	621		1788		2409		2.64	1671
	7632	200	30562		38194	200	1.957	19550

TABLE OF ORES WORKED AND QUICKSILVER OBTAINED,

FROM 1st MAY, 1886, TO 30th APRIL, 1887.

	Continuous Furnace 1.	Continuous Furnace 2.	Continuous Furnace 3.	Continuous Furnace 8.	Continuous Furnace 7.	Continuous Intermittent Furnace 9.	Intermittent Furnace 6.	Totals.
Number of days in operation.....	3.38	28	2.95	344	271	3.65	39	1.680
Tons of Ore Roasted.....	12.319.90	495.00	10283.00	8205.00	2587.20	3504.00	800.00	38.194.10
Pounds of Quicksilver produced..	319.770	16.830	206.167½	177.709½	274.864½	383.418½	116.815½	1.495.575
Yield per cent....	1.297	1.70	1.002	1.083	5313	5.471	7.30	1.957

TABLE
SHOWING ORES RECEIVED, AND WORKED
FROM MAY 1st, 1886, TO 30th APRIL, 1887, AND
QUANTITY ON HAND 30th APRIL, 1887.

	GRANZA.		TIERRAS.		TOTALS.	
	TONS.	PDS.	TONS.	PDS.	TONS	PDS.
On hand 30th April, 1886,....	758	1380	1621	1865	2380	1245
Ores received during year....	7008	100	29433	640	36441	740
Totals.....	7766	1480	31055	505	38821	1985
Ores roasted during year,.....	7632	200	30562		38194	200
Quantity on hand	134	1280	493	505	627	1785

TABLE
SHOWING THE NUMBER OF TONS TRAMMED
FROM 1st MAY, 1886, TO 30th APRIL, 1887.

Where Delivered.	Rock from Drifts, Shafts, Rock from and CrossCuts Vein.		ORE.	TIERRAS.	TOTALS.
Randol Shaft	5,221 00	28,407 45	5,928 30	17,570 61	60,427 36
Santa Isabel Shaft	18,856 59	5,629 58	824 08	3,523 44	28,833 60
Buena Vista Shaft	3,071 75			7 27	3,079 02
Washington Shaft	3,635 00	206 48	27 82	71 00	3,940 30
Santa Rita Shaft	1,812 90				1,812 90
America Shaft	5,113 25	139 99	37 93	420 47	5,711 64
St. George Shaft	852 45				852 45
Day Tunnel ...	1,102 40	369 32	85 68	693 80	2,251 20
Great Eastern. ...	1,723 80				1,723 80
Main Tunnel....	67 20				67 20
Totals.....	44,456 25	34,752 82	6,903 81	22,586 59	108,699 47

TONS.

Total Rock.....79,209 07

Total Ore.....29,490 40

Total Tons.....108,699 47

TABLE
SHOWING THE NUMBER OF TONS OF ORE
SHIPPED TO THE HACIENDA FROM 1st MAY
1886, TO 30th APRIL, 1887.

Where From.	Ore.	Tierras.	Totals.
Randol Shaft.....	5,928 30	17,870 61	23,798 91
Santa Isabel Shaft..	824 08	3,523 44	4,347 52
Buena Vista Shaft..		7 27	7 27
Washington Shaft..	27 82	71 00	98 82
America Shaft.....	37 93	420 47	458 40
Day Tunnel.....	85 68	693 80	779 48
Floyd Tunnel.....	50	48 75	49 25
Old Mine.....	38 53	364 87	403 40
San Pedro.....	33 32	12 00	45 32
Open Cut.....	17 39	6,421 11	6,438 50
Old Dump.....	14 50		14 50
Totals.....	7,008 05	29,433 32	36,441 37

STATEMENT
OF THE NUMBER OF TONS OF ORE OF ALL QUAL-
ITIES **Produced FROM THE NEW ALMADEN MINES,**
FROM THE 1st MAY, 1886, TO 30th APRIL, 1887.

Months.	GRANZA.		TIERRAS.		TOTALS.	
	TONS.	POUNDS	TONS.	POUNDS	TONS.	POUNDS
1886.						
May.....	610	800	2441	1560	3052	360
June.....	557	1240	2377	80	2934	1320
July.....	590	1640	2937	1740	3528	1380
August.....	482	1760	2715	1980	3198	1740
September.....	605	1980	2397	1860	3003	1840
October.....	598	720	2860	100	3458	820
November.....	675	1140	3008	1660	3684	800
December.....	700	1280	2857	120	3557	1400
1887.						
January.....	562	860	2892	1480	2555	340
February.....	478	140	1128	1780	1606	1920
March.....	596	1740	2209	1700	2806	1440
April.....	548	800	1605	580	2153	1380
Totals.....	7008	100	29433	640	36441	740

DRIFTING, SINKING, &c.,

FROM 1st MAY, 1886, TO 30th APRIL, 1887.

	Feet.
America Shaft.....	110.50
700 Level Plat.....	12.50
St. George Shaft.....	228.00
Pump Station.....	9.00
Tank Station, Buena Vista.....	10.50
300 S. W. Sink, Santa Rita..... (S2)	20.50
300 S. W. " "	(43) 309.50
300 Upper America.....	(250) 150.50
400 S. W. "	(253) 93.50
500 E. "	(255) 456.00
500 N. W. from Great Eastern..	(52) 545.50
600 S. W. America.....	(252) 208.00
600 N. W. "	(252) 245.50
600 W. "	(254) 282.00
600 S. E. from Junction Shaft...	(51) 128.50
650 S. W. Santa Rita.....	(44) 80.00
700 N. W. America.....	(256) 88.00
700 E. from Santa Rosa.....	6.00
50 S. E. Randol.....	(70) 154.50
850 S. E. Washington.....	(208) 75.50
850 S. "	(217) 63.50
850 N. E. "	(208) 78.50
850 N. "	(218) 35.00
900 N. E. Randol.....	(28A) 152.50
900 S. "	(28A) 24.50
900 Sink, (in labor).....	14.50
900 S. E. Santa Rita.....	(49) 43.00

Forward feet..... 3,625.50

595208A

			Feet.
Brought forward.....			3,625.50
900 E. Santa Rita.....	(49)		205.50
1000 S. W. Washington.....	(213)		391.50
1000 N. W. ".....	(214)		131.00
1000 E. ".....	(214)		37.00
1100 N. ".....	(215A)		168.00
1100 S. ".....	(216)		198.00
1200 N. Randol.....	(8)		77.00
1300 W. Santa Isabel.....	(121A)		58.00
1300 E. " ".....	(121)		66.00
1300 E. Raise, Santa Isabel.....	(T2)		18.50
1400 W. " ".....	(108)		851.00
1400 S. " ".....	(114)		523.00
1400 E. " ".....	(116)		238.00
1400 E. " ".....	(120)		109.50
1400 E. Raise, " ".....	(W2)		40.00
1400 E. " " ".....	(T2)		67.00
1400 E. Station, " ".....	(X2)		15.00
1400 E. Incline, " ".....	(X2)		154.00
1400 Intermediate " ".....	(122)		31.00
1500 N. Randol.....	(5)		87.50
1500 W. ".....	(39A)		406.50
1500 E. ".....	(39B)		98.00
1500 N. ".....	(73)		20.00
1500 N. Winze, Randol.....	(M)		134.50
1500 W. Raise, ".....	(X2)		9.00
Drift from M. Winze Randol.....			20.00
Drift from Labor XXI ".....			18.50

Forward feet..... 7,798.50

		Feet
Brought forward.....		7,798.50
1600 N. Randol.....	(6)	55.00
1600 N. "	(74)	104.00
1700 W. "	(72)	183.50
1700 W. " ..	(20A)	24.00
1750 E. "	(71)	53.00
1900 Sink Santa Isabel (in labor).....		31.50
2050 W. Sta Isabel from F2 Winze	(118)	33.00
2100 Winze Santa Isabel... ..	(R2)	41.00
2100 Sink " "	(V2)	15.50
2100 S. E. Buena Vista.....	(306)	19.50
2200 S. W. Santa Isabel.....	(115)	38.50
2200 S. E. " "	(115)	204.50
2200 N. E. " "	(115A)	20.50
2200 N. E. " "	(119)	46.00
2200 S. W. " "	(119A)	81.00
2200 Raise " "	(U2)	23.00
2300 S. E. " "	(117)	522.00
2300 S. E. Buena Vista.....	(302)	633.50
Santa Rosa Winze.....	(A)	2.00
Raise from Santa Clara.....	(Q2)	47.00
Sink from Santa Rosa.....	(Q2)	51.50
Mine Hill No. 1.....		406.00
Mine Hill No. 2.....		113.00
Floyd Tunnel.....		450.00
Webster Tunnel.....		284.50
Main Tunnel.....		24.00
Day Tunnel.....		265.00
April Tunnel.....		142.50
Raise from April Tunnel.....		25.50
Total feet.....		11,738.50

~~STATEMENT OF THE BUSINESS OF THE QUICKSILVER MIXING COMPANY,~~

~~For the Year ending April 30th, 1887,~~

To Quicksilver and Ore on hand as per last Yearly Report.	\$94,017. \$41,688 34.)		
Cost of Quicksilver produced and Ore mined in year from April 30th 1886, to April 30th, 1887,		\$135,650 34	
" Mine Pay Roll.			\$318,736 66
" Hacienda Pay Roll.			55,515 77
" Working Supplies.			133,808 44
" Sundry Expenses.			22,664 12
" Legal Expenses, California and N. Y.,			2,042 00
" General Expenses.			12,411 37
" Exchange.			159 69
" Taxes.			3,546 38
" Dividend 1½ on Pref'd Stock, Aug.'86..			53,641 25
" " " Feb.'87..			64,369 50
" Balance credit income acc't. April 30,'87			1,940,372 55
			<hr/>
			\$2,742,918 07

By Balance credit Income Ac't April 30,'86	\$1,893,925 82
" Sales of Quicksilver.	620,276 80
" Rents, &c.,	19,459 59
" Interest.	522 28
" Ore on hand.	12,880 81
" Quicksilver on hand.	186,375 00
" So. Pacific Coast R.R. Co. Right of way.	5,313 62
" " " R. R. Co. San Jose & New Almaden Branch Right of way.....	4,164 15
	<hr/>
	\$2,742,918 07

NEW YORK, April 30th, 1887.

OR IN

COMPANY,

\$4,391,300 00
 1,940,372 55

\$10,000,000 00
 1,940,372 55

\$11,940,372 55

Chic. St. DS.

OR INTEREST.

WHERE PAYABLE
 AND BY WHOM.

Debitur

Are the bonds coup

Has ~~any~~ the m. by 12. 1888.

what amount is

what price, if

is still in a
 \$18.25

THE QU

Dr.

To Real Estate and
 Houses and La-
 chinery, Tools, &

Cash

Mechanics' Bank

Bank of California

" Materials and Supp
 " Ore.....
 " Quicksilver.....

NEW YORK, April 30th,

STATEMENT

To Quicksilver and	
\$94,017.	
per last Yearly Report	
Cost of Quicksilver	
Ore mined in year	
1886, to April 30th	
" Mine Pay Roll...	
" Hacienda Pay Roll	
" Working Supplies	
" Sundry Expenses	
" Legal Expenses, &c	
" General Expenses	
" Exchange.....	
" Taxes.....	
" Dividend $1\frac{1}{4}\%$ on	
" " $1\frac{1}{2}\%$ "	
" Balance credit inc	

NEW YORK, April

MINING COMPANY,

to April 30, '86	\$1,893,925	82
.....	620,276	80
.....	19,459	59
.....	522	28
.....	12,880	81
.....	186,375	00
o. Right of way.	5,313	62
San Jose & New		
it of way.....	4,164	15

\$2,742,918 07

~~THE QUICKSILVER MINING COMPANY,~~
BALANCE SHEET,
APRIL 30th, 1887.

Dr.		
To Real Estate and Mining Property, Houses and Lands, Furnaces, Ma- chinery, Tools, &c., &c.,	\$11,657,246	
Cash		
Mechanics' Bank	.....0,435	43
Bank of California	.....25,000	00
		31,456
Materials and Supplies	.....52,414	42
Ore	.....12,880	81
Quicksilver	.....186,375	00
		<u>\$11,940,372</u>
		55

~~NEW YORK, April 30th, 1887.~~



11-15-88

THE
Quicksilver Mining Company.

ANNUAL REPORT,

(With Tables and Tabular Statements,)

SUBMITTED AT THE

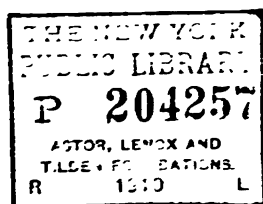
Annual Meeting of the Stockholders,

Held in New York, June, 1888.

NEW YORK :
D. MURPHY'S SON, PRINTER, 65 FULTON STREET.

1888.

W.S. 11-15-88



DIRECTORS AND OFFICERS
OF THE
Quicksilver Mining Company.

CHARTERED BY THE STATE OF NEW YORK.

Elected June, 1888.

PRESIDENT.

DAVID MAHANY.

VICE PRESIDENT.

GEORGE W. BUTTS, JR.

DIRECTORS.

DAVID MAHANY,	NEW YORK.
GEORGE W. BUTTS, JR.,	PROVIDENCE, R. I.
JAMES D. SMITH,	NEW YORK.
EDWARD BRANDON,	"
SAMUEL W. BOOCOCK,	"
CHARLES FRIES,	"
F. N. LAWRENCE,	"
SHEPPARD GANDY,	"
FRANK K. STURGIS,	"
GEORGE G. HAVEN,	"
JOSEPH MILBANK,	"

TREASURER,

F. N. LAWRENCE.

SECRETARY,

M. M. WEED.

Cover

The Quicksilver Mining Company.

(For the year ending April 30. 1888)

The **PRESIDENT'S REPORT** *states that*

To the Stockholders of the Quicksilver Mining Co.

GENTLEMEN :

I have great pleasure in submitting herewith my Annual Report, together with those of your Manager and your Superintendent at the Mines, with accompanying Tabular Statements. These reports cover the business of the fiscal year ending April 30th, 1888.

The prosperity of your Company during the year has been very encouraging, and I venture to hope that equal success may crown our labors during the coming year.

"The present production is quite satisfactory, while prices of our product remain remunerative, both of which favorable conditions we have reason to think will continue. //

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The favorable Balance Sheet which is presented to you has not been made at the expense of omission of prospecting, of depreciation of plant, or condition of Mines. Close economies and careful management have resulted in an increased production, while both the Pay Rolls and consumption of supplies have decreased so largely as to show a large increase in net earnings, and a large reduction in the actual cost of quicksilver. "

~~The showing is eminently encouraging and satisfactory.~~

I respectfully ask your attention to the full and particular Reports of both Manager and Superintendent. They seem to be complete and satisfactory.

The Financial condition of your Company, is I trust, clearly shown by the Balance Sheet and Statement of Business, which it gives me great satisfaction to transmit herewith.

With congratulations on the success of the past year, and for earnest hopes for that which is to come, I respectfully submit my Report.

DAVID MAHANY,

President.

THE QUICKSILVER MINING COMPANY.

NEW ALMADEN, CALIFORNIA,
May 19th, 1888.

To the President and Board of Directors
of the Quicksilver Mining Company, New York:

GENTLEMEN:

I have the pleasure of presenting to you a very satisfactory REPORT for the fiscal year ending April 30th, 1888, on the operations of your business entrusted to my care on the Pacific coast. The NET EARNINGS were \$328,728 16, an INCREASE of \$150,280 08 over the PREVIOUS fiscal YEAR, and are the largest yearly net profits I have had the satisfaction to give an account of since 1881.

For the period under review my RECEIPTS were \$831,724 31, and my DISBURSEMENTS were \$502,870 48, of which the details are as follows:

Gross RECEIPTS.

Quicksilver Sales.....	\$785,880 00	
Miscellaneous.....	19,135 95	
Land sold.....	1,687 70	
		\$806,703 71
Cash on hand April 30th 1887.....	25,020 00	
<i>Total</i>		\$831,724 31

DISBURSEMENTS.

Supplies.....	\$110,848 56	
Pay Rolls.....	351,598 02	
Taxes and Miscellaneous.....	28,277 80	
Improvements.....	12,146 61	
		\$502,870 48
<i>Total</i>		\$502,870 48
<i>Credit - Balance</i>		\$328,853 83

Credit - Balance

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~~Credit Balance.....\$328,853 83~~

Which is accounted for as follows:

Remittances to New York Office...	\$246,233 40	
Cash on hand.....	82,620 43	<u>\$328,853 83</u>

At the date of my last Annual Report
the balances to the credit of property
accounts were.....\$276,690 83

To which add:

Land Sold.....	1,687 70	
Net earnings for 12 months.....	328,728 18	
And there are to be accounted for.....		<u><u>\$607,106,71</u></u>

The credit balances April 30th,
1888, are:

Quicksilver.....	\$176,399 50	
Supplies.....	46,842 82	
Ore.....	42,864 55	
Cash.....	82,620 43	<u>\$348,727 30</u>

Add the following disbursements
not charged to operating accounts:

Improvements.....	\$12,146 01	
Remittances to New York office....	246,233 40	<u>258,379 41</u>
And the account is balanced for.....		<u><u>\$607,106 71</u></u>

The total sales of Quicksilver were 20,501 Flasks for
\$785,880 06, averaging \$38,33, an increase respectively of
3072 flasks, \$145,603 26, and \$2,74.

Remittances to the New York Office were increased \$112, 261 56; cash on hand increased \$57,599 83, and there were no disbursements charged to Legal expenses against \$1,517 00 in the preceding year.

The ~~net~~ income and operating expenses are shown in the following statement:

EARNINGS.

From 20,500 flasks of Quicksilver produced, average value, \$37,85	\$775,904 56
" Rents	18,754 40
" Miscellaneous	381 55
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	\$795,040 51

EXPENSES.

Mine Pay Rolls	\$297,607 17
Hacienda "	53,990 86
Taxes and Miscellaneous	28,277 89
Supplies consumed for operating (Mine and Furnaces)	116,420 16 496,296 07
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	Difference \$298,744 44
Add increase in Ore at Furnaces	29,983 74
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Net earnings... <i>1887-88</i>	\$328,728 18

Compared with the previous year *there was* ~~we have~~ an increased Quicksilver production of 950 flasks,—gross earnings increased \$52,896 ~~00~~; Mine Pay Rolls decreased \$21,129 ~~88~~; Hacienda Pay Rolls decreased \$1,521 ~~41~~; Taxes and Miscellaneous increased \$1,394 ~~72~~; Consumption of Supplies decreased \$17, 388 ~~66~~; Total Expenses decreased \$38,647 ~~72~~; and net earnings increased \$150,280 ~~78~~.

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The actual cost per flask of Quicksilver produced was distributed as follows: Mine Pay Rolls \$14,513, Hacienda Pay Rolls \$2,632, Pay Rolls together \$17,15, Mine Supplies \$3,776, Hacienda Supplies \$1,902. Taxes and Miscellaneous \$1,38, Total \$24,21, from which deduct receipts from rentals and miscellaneous \$0,934, and add increase in ore at Furnaces \$1,462 and the average is \$21,814, against \$27,32 in the preceding year, a decreased cost of \$5,506 per flask.

Included in the Mine Pay Rolls were \$91,448 44, equal to \$4,46 per flask, for labor in prospecting and dead work. This last expense can be calculated upon to average about \$100,000 yearly, and is essential to the life of the mine, for without a constant persistent, intelligent and successful search for new ore bodies our supplies of ores would soon become exhausted.

104,490⁶³ tons were trammed and brought out of the mines, of these 79,610⁷⁴ tons were waste rock, and 24,879⁸² tons were workable ores; 6,277¹¹¹ tons were obtained from surface workings, making a total of 31,157¹²² tons of ores produced, —adding to these 627¹³³ tons on hand at the beginning, we have 31,785¹⁴⁴ tons available, —29,839¹⁵⁵ tons were worked, leaving on hand 1945¹⁶⁶ tons.

The quantity of ore roasted shows a decrease of 8,354¹⁷⁷ tons, and the percentage yield of Quicksilver 2.62¹⁸⁸ per cent. an increase of 0.67 per cent.

Two miles of drifting and sinking, independent of excavations in the ore labores, were added to the previous work in this line, making the total extent of underground passages over 50 miles.

The subject of obtaining our fuel supply for furnaces and boilers, at a reasonable price, has received serious consideration. As a partial relief we have adopted the use of crude petroleum for fuel under the boilers at Buena Vista shaft, which furnish

steam for a large pumping engine; so far the results are satisfactory for that use, but it is not believed to be as applicable in supplying steam for hoisting engines. Our comparative tests showed it to be an economical fuel at the Buena Vista shaft when coal cost by the cargo \$6.12 per ton in San Francisco. On that basis I made a contract for one and two-third years, for which I have reason to be well pleased as coal has since risen to \$12 per ton.

The source of our wood supply for furnace fuel is largely exhausted and yearly grows more distant; hence the price is increased by the lessened quantity and the longer haul, and we soon shall be compelled to pay prices almost prohibitive, or to substitute fuel gas, if after trial the latter shall be found suitable.

The expenditure charged to improvements \$12,146 01, includes the cost of building and furnishing a new boarding house for miners on the Hill, a very much needed improvement; a house for the mine clerk; the outlay for building and furnishing a Hall for the use of employees at the Hacienda, with bedrooms in its second story for the accommodation of transient visitors, also painting the Casa Grande:—For further information I beg to refer to the elaborate statements and tables herewith; and to the full report by Colonel F. Von Leicht, Superintendent on the operations of the mines and furnaces.

For the year ending December 31st, 1887, the total production of Quicksilver in California was 33,760 flasks, a gain of 3,779 over the preceding year. 2000 flasks of this increase were produced at New Almaden, and of the balance 1779, one newly worked mine produced 1543 flasks. The price of Quicksilver for the period between January, 1887, and May 15th, 1888, has shown extraordinary fluctuations. Opening in January 1887, in San Francisco, at \$38.50 per flask, it fell to \$37.50 in March; rose to \$40 in April, gradually falling off to \$36.50 in August; rose to \$38 in September; ruled at \$37

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for October and November, and rapidly advanced to \$48 in December. But this sudden rise in price, which was largely speculative, checked the demand and the tendency since has been steadily downward. In January 1888 it fell to \$42; in February to \$40; in March to \$38.50; in April to \$38 and to \$37.25 in May. In New York in the month last named the price fell to \$36, in expectation of a removal of the ad val. duty of 10%, a measure not desired by miners of precious metals and protested against by all producers of American Quicksilver. //

The London price of Quicksilver also had important changes. It opened January 1887, £7,5s,6d, fell in May to £6,10s, rose to £7,15s in October, jumped to £8, and £9,15s in November, in December to £10,5s, and £11,5s, and closed that year at £11, opening January 1888, at £10; it has slowly fallen by 5s. to 15s. changes to £6,15s. The rapid advance in the London market in December made a demand in San Francisco for Quicksilver to be shipped to China, and about 3000 flasks were sold for that market, the first transaction since 1885, when the total shipments there were 233 flasks.

It is not expected that there can be any increase in the California production even if the present price be maintained, while it certainly will largely fall off if the article be placed upon the free list, as then lower prices will result and the poorer mines will be compelled to suspend operations.

In closing this report I have to thank the Board of Directors for their uniform courtesy and consideration, and to express my obligations to the Company's officers and employees in California for the satisfactory results of the year's work.

Your obedient servant,

J. B. RANDOL,

Manager.

*Dividends of 5 1/2 per cent -
on the present stock ab-
sorbed \$236,021 of the net*

STATISTICS

APPENDIX TO

MANAGER'S REPORT.

1887-88.

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EARNINGS AND EXPENSES

FROM MAY 1st, 1887, TO APRIL 30th, 1888.

From :

20,500 flasks of Quicksilver, averaging
\$37,85 per flask.....\$775,904 56

20,501 flasks sold at an average
of \$38,33⁴,.....\$785,880 06

Less :

4,970 flasks product of pre-
vious 12 mos. unsold
April 30th, 1887, then
valued at \$37,50 each,
and now counted sold
at that rate..... \$186,375

Leaving :

15,531 flasks of product for
12 mos. ending April
30th, 1888, sold at an
average of \$38,60,.....\$599,505 06

2,100 flasks are consigned
abroad val'd at \$35,50 74,550

2,869 flasks are in Califor-
nia, valued at \$35,50, 101,849 50 \$176,399 50

20,500 flasks Quicksilver pro-
duced average value \$37,85.....\$775,904 56
Rents and Miscellaneous, ... 19,135 95

Total Earnings,.....\$795,040 51

Total Earnings brought forward.....\$795,040 51

EXPENSES.

Mine Pay Rolls.....\$297,607 16

Hacienda Pay Rolls..... 53,990 86

Miscellaneous and Taxes..... 28,277 89

Supplies consumed for operating

Mines and Furnaces..... 116,420 16

Total Expenses.....\$496,296 07

Difference.....\$298,744 44

Add:

Increase in Ore at Furnaces..... 29,983 74

Net Earnings.... \$328,728 18

ACCOUNT OF SUPPLIES

From May 1st, 1887, to April 30th, 1888.

The changes in Supplies have been as follows :

Balance April 30th, 1887.....	\$52,414 42
Purchased during 12 months ending	
April 30th, 1888.....	\$115,388 81
Less: Sales.....	4,540 25 110,848 56
	\$163,262 98

Consumed for general operations :

At the Mine....	\$77,411 47
At the Hacienda.....	39,008 69
	\$116,420 16
Balance April 30th, 1888.....	46,842 82
	\$163,262 98

MEMORANDUM OF PRINCIPAL SUPPLIES
ON HAND APRIL 30, 1888.

Candles and Oils.....	\$457 22
Coal.....	11,519 64
Flasks.....	5,319 05
Hay and Grain.....	232 00
Iron, Steel and Hardware.....	2,976 95
Lagging.....	1,736 47
Lumber and Timber.....	16,230 68
Powder, Fuse and Caps.....	450 87
R. R. Iron... ..	125 00
Wood.....	7,078 86
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	\$46,126 74
Balance, minor items.....	716 08
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Total.....	\$46,842 82
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IMPROVEMENTS

FROM MAY 1st, 1887 TO APRIL 30th, 1888.

The expenditures for Improvements not
charged to current working expenses were.....\$12,146 01

FOR THE MINES.

Houses on Hill.....\$7,181 89

FOR THE HACIENDA.

Houses at Hacienda.....\$4,964 12

Total.....\$12,146 01

MONTHLY PRODUCTION OF QUICKSILVER

FROM MAY 1st, 1887 TO APRIL 30th, 1888.

1887,		
May.....	2,040	Flasks.
June.....	1,700	"
July.....	1,567	"
August.....	1,517	"
September.....	1,535	"
October.....	1,405	"
November....	1,225	"
December.....	2,152	"
1888,		
January.....	2,650	"
February.....	1,730	"
March.....	1,400	"
April.....	1,579	"
Total	20,500	Flasks.

**PRODUCTION OF QUICKSILVER
IN CALIFORNIA,**

FOR THE YEAR ENDING DECEMBER 31st, 1887.

MINES.	1886.	1887.	Flasks.
Ætna.....	3,478	2,880	598 Decrease.
Great Western.....	1,949	1,446	503 “
Great Eastern.....	735	673	62 “
Napa Cons.....	1,769	2,694	925 Increase.
Sulphur Bank.....	1,449	1,890	441 “
New Idria.....	1,406	1,490	84 “
Redington.....	409	689	280 “
Bradford.....	1,543	1,543 “
Various.....	786	455	331 Decrease.
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New Almaden.....	11,981	13,760	1,779 Increase.
	18,000	20,000	2,000 “
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Total Flasks.....	29,981	33,760	3,779 Increase.

PRODUCTION.	OUTSIDE MINES.	NEW ALMADEN.	TOTAL FLASKS
1880	36,461	23,465	59,926
1881	34,791	26,060	60,851
1882	24,662	28,070	52,732
1883	17,725	29,000	46,725
1884	11,913	20,000	31,913
1885	10,673	21,400	32,073
1886	11,981	18,000	29,981
1887	13,760	20,000	33,760

**TOTAL EXPORTS OF QUICKSILVER FROM
SAN FRANCISCO.**

FOR THE YEAR ENDING DECEMBER 31st, 1887.

To	1886.	1887.	Flasks.
China.....		3,105	3,105 Increase.
Mexico.....	5,530	6,397	867 "
Central America.....	23	119	96 "
New Zealand.....	91	100	9 "
New York.....	600	8,370	7,770 "
Japan.....	3		3 Decrease.
Various.....	54	28	26 "
By Sea.....	6,301	18,119	11,818 Increase.
Overland by Rail.....	10,000	4,000	6,000 Decrease.
Totals.....	16,301	22,119	5,818 Increase.

Year.	Total Production.	Total Exports.	Balance for Stock and Home Consumption on Pacific Coast.
1880	59,926	46,294	13,632 Flasks.
1881	60,851	45,799	15,052 "
1882	52,732	40,417	12,315 "
1883	46,725	57,867	8,858 "
1884	31,913	21,901	10,012 "
1885	32,073	25,730	6,343 "
1886	29,981	16,301	13,580 "
1887	33,760	22,119	11,641 "

NEW ALMADEN,
May 15th, 1888.

J. B. RANDOL, Esq.,
 Manager.

DEAR SIR :

I herewith respectfully submit my report on the condition of the mines and works under your charge, for the fiscal year beginning with May 1st, 1887, and ending with April 30th, 1888.

The various occurrences and operations that took place during this year have been fully described in the monthly reports and statements, I shall, therefore, restrict myself to a synopsis of the year's events, giving a brief outline of the work done in the different departments, the extent and nature of the ground that has been prospected and opened up in the mine and making such remarks and suggestions as will be of particular interest.

PRODUCTION.

The tabular statements show the total amount of material extracted from the different shafts, drifts and winzes during the fiscal year 1887-8, as 104,490,63 tons.

This output compared with the one of the previous year (108,699,47 tons) shows a decrease of 4,208,84 tons.

The total tonnage is to be divided as follows :

From ore chambers,.....58,936,73 tons,

From dead-work and prospecting,...45,553,90 "

Total.....	104,490,63
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The 58,936,73 tons of material extracted from the ore chambers, after being cleaned, netted :

5,925,40 tons of ore, (granza.)

18,954,49 tons of tierras,

Total,	24,879,89 tons of ore.
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From surface workings, and from the old mine were obtained :

45,88 tons of ore, (granza.)
6,231,83 tons of tierras,
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Total, 6,277,71 tons of ore.

These two items give an aggregate of 31,157,60 tons of ore that were shipped to the Hacienda for reduction, while in the previous fiscal year (1886-7,) 36,441,37 tons were delivered at the Hacienda.

The ore production in 1887-8, compared with that of 1886-87, shows therefore a decrease of 5,283,77 tons.

This decrease in ore is divided as follows :

From new workings,.....	4,610,51 tons,
From old mine,.....	673,26 tons,
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Total as above,....	5,283,77 tons.

The amount of ore of all descriptions reduced by the furnaces during the fiscal year 1887-8 was 29,839,55 tons, while during the preceding year 38,194,40 tons were reduced by the furnaces ; a decrease of 8,354,55 tons for 1887-8.

The yield, however, from these 29,839,55 tons of ore in 1887-8 was 20,500 flasks of Quicksilver, or 950 flasks more than in 1886-7, giving 2.627 per cent Quicksilver, or a gain of 0.67 per cent.

UNDER-GROUND DEVELOPMENT, PROSPECTING.

The total amount of drifting and sinking done in the mine during the year 1887-8 is 10,532.5 feet or two miles, less 27.5 feet, from 80 different points.

This total amount is divided as follows :

Randol Shaft from 31 points.....	2518.5 feet,
Santa Isabel Shaft from 5 points.....	1750.5 "
Buena Vista " " 1 "	124.0 "
Washington " " 15 "	1427.5 "
America " " 8 "	1410.5 "
St. George " " 8 "	1470.5 "
Day Tunnel, " 7 "	658.0 "
Miscellaneous, " 5 "	1173.0 "

Total from 80 points.....10,532.5 feet.

The explorations and developements that were made from these different points I shall now attempt to describe.

RANDOL SHAFT.

This shaft has been, as heretofore, the most productive among the several shafts for the output of ore, and the work of prospecting has been carried on with the usual vigor. Notwithstanding the extensive stopes that have been worked from the different levels of this shaft in previous years and that seemed to indicate entire exhaustion, the explorations made during the year, opened up virgin ground that proved to be of considerable value. These explorations were principally on the 800, 900, 1000, 1400, 1500, 1600, 1700 and 1800 levels.

800 Foot LEVEL.

On this level the vein was followed and cross-cut North-East-erly for 147.5 feet and some traces of ore were found, but not in paying quantity.

An upraise along a small branch of metal at a point above the 900 labor was driven ahead 85 feet, showing good metal in the last 20 feet. This ore shoot apparently forms a connection with the old Theatre labor, the character and occurrence

of metal being so much alike. Some good ore has been broken in this upraise and still continues ahead, but work had to be stopped for the present, as the sinking of the Day Tunnel incline interferes with the tramming.

900 FOOT LEVEL.

This level has been extended along the North Vein a distance of 79.5 feet and some fair grade ore has been found.

1000 FOOT LEVEL.

On this level a raise (J_s) was carried upward 51 feet from the 1000 foot labor showing fair grade ore all the way.

1100, 1200 & 1300 LEVELS.

No prospecting was done from these levels, but they were kept in good condition for tramming the ore, which tributaries broke in and around the old labors.

1400 FOOT LEVEL.

The North drift has been cleaned out and retimbered, and extended 43 feet along vein to find the ore body which reaches near this point on the 1500 foot level.

1500 FOOT LEVEL.

This level is at the present time the main ore producer and has been so for the past year. The explorations were carried on with great energy and extended far into the Western ground. 85.5 feet were driven (drift 39 A) along vein and alta, with good bunches of ore in the start, when the vein suddenly disappeared. A cross-cut was then made Southerly to find the vein again, but proved futile. Going back 40 feet along the vein, where a fault had been observed, the fault was followed Southerly 10 feet and opened up into a well defined vein with branches of metal. This vein was then carried

31.5 feet Westerly when it also disappeared with alta ground as foot-wall.

A cross-cut South 54 feet through this alta reached the contact of serpentine and continuing along this contact Westerly for 9 feet, vein again appeared but carried no indications of ore. This vein was followed a total distance of 81.5 feet when another fault occurred and the drift was stopped. The ground being here very disordered and folded, a new branch drift was started some 18 feet back from the face and 17 feet were driven Westerly when water and gas were struck. The drift was diverted North Westerly 10 feet through alta and vein was again found and the contact between the vein and alta followed 74.5 feet, but without any indications of ore and drifting was stopped for the present until the character of the ground has been sufficiently explored from either the upper or lower levels.

A drift (39 B) was run from (39 A) 25 feet Easterly and connected with drift (7) West Randol, showing ore in the whole distance.

A winze (Z_2) was sunk from this level and connected with the 1600 level, 58 feet of this winze being in good ore. A raise (A_3) to ventilate the ground was made a distance of 139.5 feet, and connected with the 1400 Intermediate West Isabel, carrying ore for the whole distance.

From winze (Z_2) a drift, called 1500 Intermediate was started and run Westerly 95 feet, showing ore in the first 20 feet and in the last 20 feet, when work was stopped for the time.

On the North 1500 level the drift was extended 39.5 on contact of vein and alta, but the vein looking unfavorable for carrying ore, the drift was stopped.

1600 FOOT LEVEL,

On this level explorations were carried on Westerly to trace the continuation of the ore body found on the 1500 level

above, but although extended beyond the ore bearing ground on the level above, it proved very disappointing, as only traces of metal were found. The face of this drift is now in the same disordered ground mentioned above as found in the 1500 level West. A cross-cut that was run South picked up a false vein, that also proved worthless, since only traces of metal were observed.

It is intended to continue the 1500 Intermediate Westerly in order to follow the metal in its general course. On the 1600 North a branch drift (76) was run, cutting first through 8 feet of vein, then on contact of vein and alta for 58 feet, when the vein disappeared, then 52 feet on serpentine and alta, when the alta disappeared and the drift was stopped.

From the 1600 level a winze (I_3) was sunk in alta to prospect the ground between two branch drifts, when vein was found at a depth of $26\frac{1}{2}$ feet, carrying fair grade metal for about 10 feet. The winze was continued on a gradually narrowing and barren vein a further distance of 48.5 feet. After connection is made with the old works on the 1700 foot level an intermediate drift will be started East into the metal-bearing ground.

1700 FOOT LEVEL.

The West drift (72) was continued 123.5 feet, some traces of metal were found for a short distance, but the drift stopped with a hard barren vein. This point is now below the productive vein of the 1500 level and further continuation may develop a metal-bearing vein.

On the 1700 North level a winze (F_3) was sunk to prospect for a supposed blind vein, found in the 1800 level, that carried much native mercury, but could not be worked on account of bad ventilation. After sinking 24 feet through serpentine a barren vein was found. Sinking on it a further distance of 17

feet it showed traces of native mercury and cinnabar and continued improving downwards until connection was made with the 1800 foot level. The ground is now opened up into a narrow labor from the 1800 level; the ore carries native mercury in paying quantities.

A winze (N_3) was begun to develop the ground between the 1800 and 1900 levels North, that had heretofore proved unremunerative; 22.5 feet have been sunk on a slightly inclined vein, that carries traces of metal all the way. The developments are watched with much interest as there is a large piece of ground, which although in the very heart of the general ore shoot that gave such favorable results in the upper levels, had baffled all efforts and beyond showing traces of ore appeared to be almost entirely barren of metal. The vein is well defined and has all the constituents of a metal-bearing vein except that it contains more silicates that seem to have prevented the infiltration of cinnabar.

SANTA ISABEL SHAFT.

The explorations from this shaft were confined to the 1400 Level East (116) and the 1400 Intermediate (122).

1400 FOOT LEVEL, EAST.

159 feet were driven on contact of serpentine and alta and 111 feet were cross-cut through serpentine, when vein was struck that carried some traces of metal. Going through the vein a distance of 20 feet connection was made with old labor. From the last mentioned contact of vein and serpentine a drift was run on vein and alta 43 feet North and West, showing occasional traces of metal. The air becoming poor, a branch drift was started at a point some 250 feet Westerly, and run Easterly 126 feet through alta to find the ore-bearing vein of the 1500 Randol, but without success—the ground being very faulty.

1400 INTERMEDIATE.

This drift was extended Westerly and Easterly for a distance of 513.5 feet, most of this distance on contact of vein and alta, and traces of ore were found, but not in paying quantities, which is the more remarkable since in the levels above and below there are good deposits of ore. A cross-cut was run South 53.5 feet to find the ore shoot worked in the 1300 labor, but serpentine was struck and work was discontinued.

Upraises (C_3) from the 1400 level was made and connected with (C_3) from the 1200 St. George, showing good ore most of the distance.

The 1400 Southwest (which is to connect with the America shaft) run by machine drills, was continued straight ahead 579.5 feet through serpentine and alta when carbonic acid gas was struck, which stopped the work till air boxes had been arranged to drain the gas. Drifting was then continued with interruption from increased flow of gas, and the face of the drift is now 480 feet from the America shaft. An eleven inch pipe was run into the drift from the Santa Isabel shaft house and air forced in by two Baker blowers, while a Blackman Exhaust Fan drew the vitiated air by an air box, still the air is poor for working, and causes much delay.

THE 1400 SOUTH DRIFT

that communicates with the Washington shaft has been kept in good condition, being one of the principal ventilating drifts, for this part of the mine and the outlet for the water from the Washington Mine.

BUENA VISTA SHAFT.

2000 FOOT LEVEL.—This new level was started in March from the incline that connects the 1900 Randol with the 2100 Buena Vista. The purpose of this drift is to prospect the ground below the rich ore shoot formerly worked from the 1700 Ran-

dol. 118 feet were drifted Easterly through alta and sandstone, when vein was found, and 6 feet drifted on contact of vein and alta. The vein is of good appearance but without traces of metal as yet.

There is a piece of ground remaining between this 2000 vein and the 2100 vein, explored from the Buena Vista Shaft, that is about 400 feet in length.

These two veins, if connected, will necessarily lay very flat. The 2100 Buena Vista level disclosed some very rich bunches of metal, and it is only fair to suppose that the ground is not entirely barren and that other deposits of metal will be found in this intermediate ground, which could be easily mined and cheaply transported.

WASHINGTON SHAFT.

The explorations from this shaft were carried on with much energy during the first six months of the fiscal year, but did not develop any good results.

Explorations on the 850 foot level were made in four different directions; five drifts were run from the 900 foot level; two from the 1000 foot level, and one from the 1100 foot level. Small branches of ore were occasionally found and followed up, but the output in ore has been very small. Altogether the vein in the Washington Mine is more irregular than in the Randol Mine. The ore appears too much scattered and distributed through the entire vein stone, making it of low grade and unremunerative for working.

This disappointment has led to the abandonment of the Washington Mine for the present, and the hoisting machinery has been transferred to the America Shaft where the sinking of the shaft to a greater depth required a more powerful hoisting apparatus.

AMERICA SHAFT.

The 500 foot level was continued Easterly some 70 feet along a well defined vein, that showed no traces of ore.

The 600 foot level advanced Northerly 49.5 feet of which 20 feet through vein to alta, then on contact, but no ore was found. The 600 foot Level South was extended 89.5 feet and then discontinued as unfavorable.

A winze (Y_2) to connect with the 700 foot level was started on metal and carried it for 34.5 feet, then for 63.5 feet on contact of vein and alta, when further work was stopped by gas. This same winze was met by an upraise from the 700 level, where it also carried some fair grade ore.

The 700 foot level advanced Northerly some 320 feet, only showing traces of ore. A branch drift started from the last mentioned drift Easterly and continued some 180 feet, showing traces of metal for its last 20 feet. Work in the America Mine was stopped in October and in November sinking of the shaft was begun, with the object of reaching the 1400 level of the Santa Isabel. 328 feet were sunk, when a large inflow of water, exceeding the pumps' capacity, stopped further sinking. The Burleigh air compressor from the Washington Shaft was transferred to furnish motive power for two donkey pumps. These pumps worked from the 8th March until the end of the same month, but were unable to overcome the large quantities of inflowing water. These donkey pumps were then stopped and the water was allowed to rise to the 700 level, where it is kept in check by the large Cornish pump. It is expected that the mine and shaft will drain itself as soon as the 1400 cross-cut from the Santa Isabel has sufficiently advanced.

ST. GEORGE SHAFT.

The sinking of this shaft to a depth of 536 feet, corresponding with the 1200 level of the Randol Shaft, was completed in July 1887. The cross-cut North was then started and driven 194 feet through serpentine and 34 feet through vein, the last 3 feet in very rich ore. From this point drifts East and West were run along contact of vein and alta, the West drift showing good ore for a distance of 40 feet, and finally stoppin

at a distance of 240 feet in very disordered ground, with no ore in sight. The East drift extends 314.5 feet showing traces of ore in the last few feet.

A winze (C_3) was connected with the workings from the Santa Isabel Shaft, showing some fair grade ore part of its way.

A raise (H_3) to prospect the ground about the 1200 level was made upwards 95.5 feet showing bunches of good ore all along its course, and another level corresponding with the 1100 Randol level started East and extended 56.5 feet, showing good ore only in the first few feet.

The drainage of the St. George Shaft is accomplished by pipes that carry the water to the 1400 level of the Santa Isabel Shaft.

DAY TUNNEL.

Some prospecting was done in the ground Southwest from the tunnel, with unfavorable results.

A sink (D_3) was made a distance of 61 feet showing indications of metal in the first 10 feet only, and finally stopped in barren vein with little prospect for improvement.

DAY TUNNEL INCLINE.

To prospect the ground lying easterly of the Randol workings and which has not yet been reached by any one of the drifts along what is known as the "North Vein," a new incline shaft was started in February, 1888, from a point 350 feet inside from the mouth of the tunnel. An upright boiler has been set up at the mouth of the tunnel, carrying the steam by pipes with expansion joints to the small hoisting engine, which is placed inside of the tunnel, and opposite the mouth of the new shaft. This new shaft has an inclination of 60 degrees and runs at right angles with the line of Day Tunnel, and with a Westerly course.

The shaft has two compartments, one for hoisting, the other for ladder way. The total depth attained at present is 131 feet, with alta ground. It is expected to sink this incline shaft a total perpendicular depth of 300 feet to reach the 1100 foot level of the Randol Shaft.

SURFACE WORKINGS.

SOUTH ST. GEORGE.

On the ridge South of the St. George Shaft some croppings were discovered that contained small veins of good metal and in sinking a prospect hole these branches of metal appeared to continue. To reach the ground at greater depth a tunnel was started and extended into the vein a distance of 280 feet. The vein is of good character and traces of metal were found but not in paying quantities.

APRIL TUNNEL.

This tunnel was run on a similar prospect, which apparently connected with the old San Pedro workings, but the drift ran into serpentine and work was stopped.

BRIDGE TUNNEL.

This tunnel was started for the purpose to prospect the country between the Cora Blanca Mine and the old Velasco tunnel, both of which produced rich ore. Up to date no vein has yet been found although the indications favor the supposition that the vein is not very far off.

WEBSTER TUNNEL AND FLOYD TUNNEL.

These prospects extend into the ground of the old mine about 50 feet above the main tunnel. Traces of ore were found but not sufficient to encourage further work, and the drifts were stopped.

OLD LABORS.

The different Labors worked by tributers from the 900 to the 1800 level of the Randol shaft, the 1400 and 2000 foot level of the Santa Isabel shaft, on the 850 foot level of the Washington Shaft, in the old levels of the America Mine and in the Old Mine Hill, have furnished considerable quantities of ore, some of high grade. Their ore-producing limits have been narrowed down very much, and a few of the old labors have been entirely stopped for want of metal in paying quantities.

Still it has been a matter of surprise to note from month to month the discoveries of new branches of metal radiating from the old ore chambers and extending beyond expected limits. There are many such points left yet, which will be taken up by tributers in the course of time and will contribute their share of metal to the general output.

NEW LABORS.

The 1500 level West Randol is at present the principal ore producer, and 52 miners are now working there on footage. This ore body extends now 300 feet in width, the largest width of ore deposit ever found in this mine, and some excellent metal has been broken from it. But as a reverse to this charming picture I have to state that the extent of this ore deposit upwards and downwards appears to be limited between the 1400 and 1550 levels.

The exceptionably rich ore bodies worked from the 1200 level of the St. George Shaft are disappointingly small and scattered, while the West ground carries a very broken vein, as exemplified in the 1200 St. George, and the 1500 and 1600 levels Randol.

Efforts have been made to push ahead along the promising vein from the 1400 level Santa Isabel.

The drift has already been extended some 180 feet beyond the ore producing ground and if any encouraging features are here disclosed, it will not be long before the same ground will be opened from the 1100 level down to the 1700 level, all of which levels have been driven far ahead.

A branch vein which has been found in winze F_3 furnishes some low grade ore, mostly carrying native mercury, and is now worked by 6 men. The winze I_3 on the 1600 level West Randol disclosed some ore which leads me to believe that the old labor on this level extends further downwards, and a new winze on the 900 level East Randol has been started in the hope of picking up again the ore bearing ground which apparently lost itself above the 1000 level.

The upraise on the 800 North Randol has been also mentioned before as carrying fair grade ore, and the new winze on the 1800 North Randol shows indications of ore.

MACHINERY.

The machinery at the different shafts is all in good condition, except at the Randol Shaft, where the hoisting engine has served so long now that repairs become frequently necessary, and it will be imperative to replace it by a new plant should new ore bodies be developed in the ground now prospected by the Day Tunnel incline.

The pumping engine at the Buena Vista Shaft has run smoothly and regularly during the year and has raised 72,594,800 gallons of water against 86,000,000 of water in the previous year, showing considerable abatement in the flow of water from the different parts of the mine.

Comparing the two months of April in 1887 and 1888, it appears that 7,359,400 gallons of water were raised in April

1887, against only 5,065,300 gallons of water in April 1888, a diminution of 2,294,100 gallons, and the pumping engine is now running at the slowest speed.

Trials that have been made and proved successful led to the adoption of fuel oil in the place of coal at the boilers of the Buena Vista Shaft and oil has been used there without interruption since September 1887.

The 12x24 inch hoisting engine from the Washington Shaft, as before stated, was transferred in November 1887 to the America Shaft, also one of the 56in. boilers.

The Burleigh air compressor, as before stated, was removed from the Washington Shaft to the America Shaft, and the upright boiler, used at the America Shaft, transferred to the mouth of Day Tunnel.

Among other improvements made by the Machine Department the following may be noted :

The Randol Shaft hoisting engine has been refitted with new spur wheel, pinion wheel and new reel shaft, also a new piston rod and valve stem.

A new feed water heater from Buena Vista was set up at the Randol Shaft.

The Clayton air compressor at the Santa Isabel Shaft has been rebuilt in an improved manner.

The Burleigh air compressor at the same shaft has had delivery valves and seats refitted.

Two boilers at the Santa Isabel Shaft received extensive repairs, made necessary by an accumulation of scales, two new smoke stacks were put in position and a new system of pipe connections between boilers has been put up to prevent foaming.

Two Baker blowers and small steam engine have been erected, as already stated, at the Santa Isabel Shaft on the surface, and one Blackman Fan and engine set up at the 1400 foot level.

In Day Tunnel, as before mentioned, one small hoisting engine was set up, also upright boiler at mouth of tunnel.

At the Buena Vista Shaft a new feed water heater was put in place.

At the St. George Shaft a Baker blower and engine were set up and afterwards removed.

At the Washington Shaft a syphon was arranged on the 1100 foot level to drain the mine towards the Santa Isabel Shaft.

A water tank of 13,000 gallons capacity has been erected at the America Shaft to which is connected a pump that can be used for feeding boilers or as a fire pump.

A new self-dumping skip was placed in the America Shaft, and the feed water heater from the Washington Shaft has been removed to the same shaft.

Many other minor repairs and refittings were made.

MISCELLANEOUS.

The roads, planillas, houses, water pipes and tanks have received all necessary care and attention and are in a satisfactory condition.

The boarding house on the Hill, which had become very old and unfit for further repairs was broken down and replaced by a new two-story building with basement, erected in its place.

The excavation for the foundation, made on the old Velasco dump, furnished a sufficient quantity of good tierras to pay all the expenses of this much needed improvement.

A new dwelling house was built on the Hill, and a hall has been erected at the Hacienda for the use of the employees and their families.

The main incline has been kept in good condition. A storage tank for fuel oil has been set up near the Railroad station and another on the Hill near the Randol Planilla, with a smaller supply tank for the daily consumption of fuel oil near Buena Vista Shaft.

The small old flume, that carries the water for domestic uses at the Hacienda, has been replaced by a new one of larger size.

Various additions and repairs have been made to buildings and everything has been kept in a proper state of efficiency.

REDUCTION WORKS AT HACIENDA.

The furnaces and condensers have worked in a most satisfactory manner and few repairs have been required.

As an important improvement I mention the extension of the wooden chimney flue from furnaces 1 and 2, which was carried 270 feet farther up the hill-side to prevent the escaping gases to settle around the furnaces.

Three iron condenser pipes between the water tank and brick condenser of No. 9 furnace were replaced by new pipes of $\frac{1}{4}$ in. iron, 18 feet 10 inches long and 22 inches diameter.

A small auxiliary steam engine was added to the plant of the Guibal Fan working furnaces, 3, 6, 8, 7 and 9, to prevent the stoppage of the fan should immediate repair be necessary to the engine in action.

S T A T I S T I C S

APPENDIX TO

SUPERINTENDENT'S REPORT.

1887-88.



STATISTICS
APPENDIX TO
SUPERINTENDENT'S REPORT.
1887-88.

TABLE

SHOWING ORES RECEIVED AND WORKED
FROM MAY 1st, 1887, TO 30th APRIL, 1888 AND
QUANTITY ON HAND 30th APRIL, 1888.

	GRANZA.		TIERRAS.		TOTALS.	
	TONS.	PDS.	TONS.	PDS.	TONS.	PDS.
On hand 30th April, 1887..	134	1280	493	505	627	1785
Ores received during year....	5971	560	25186	640	31157	1200
Totals.....	6105	1840	25679	1145	31785	985
Ores roasted during year,	5689	100	24150	1000	29839	1100
Quantity on hand,	416	1740	1529	145	1945	1885

TABLE

SHOWING THE NUMBER OF TONS TRAMMED
FROM 1st MAY, 1887, TO 30th APRIL, 1888.

Where Delivered.	Rock from Drifts, Shafts and Cross Cuts	Rock from Vein.	ORE.	TIERRAS.	TOTALS.
Randol Shaft.....	15,270 00	31,345 61	5,361 32	16,779 47	68,756 40
Santalsabel Shaft.....	9,843 00	2,182 55	422 77	1,309 93	13,758 25
Washingt'n Shaft.....	4,145 50	274 76	19 47	132 72	4,572 45
America Shaft.....	6,020 00	72 06	13 79	85 15	6,191 00
St. George Shaft.....	4,024 60	151 86	54 77	179 74	4,410 97
Buena Vista Shaft.....	484 20				484 20
Day Tunnel....	2,490 60		23 72	121 43	2,635 75
Floyd Tunnel....				63 80	63 80
Bridge Tunnel....	757 40				757 40
April Tunnel....	1,334 20				1,334 20
South St. George.	877 80				877 80
Old Mine..	306 60	30 00	29 56	282 25	648 41
Totals.....	45,553 90	34,056 84	5,925 40	18,954 49	104,490 63

TONS.

Total Rock,.....79,610 74

Total Ore.....24,879 89

Total Tons.....104,490 63

TABLE

SHOWING THE NUMBER OF TONS OF ORE SHIP-
PED TO THE HACIENDA, FROM 1st MAY, 1887,
TO 30th APRIL, 1888,

Where from.....	Ore.	Tierras.	Totals.
Randol Shaft.....	5,361 32	16,779 47	22,140 79
Santa Isabel Shaft...	422 77	1,309 93	1,732 70
Washington Shaft....	19 47	132 72	152 19
America Shaft.....	13 79	85 15	98 94
St. George Shaft.....	54 77	179 74	234 51
Day Tunnel	23 72	121 43	145 15
Floyd Tunnel.....		63 80	63 80
Open Cut.....	12 25	5,116 85	5,129 10
Old Mine.....	50 08	561 07	611 15
Upper Mine.....	— 50	12 25	12 75
Vasquez Tunnel Dump	2 00	749 45	751 45
Santa Clara No. 1....	6 74	55 17	61 91
New World	3 87	19 29	23 16
Totals.....	5,971 28	25,186 32	31,157 60

STATEMENT

OF THE NUMBER OF TONS OF ORE OF ALL QUALITIES **Produced** FROM THE NEW ALMADEN MINES FROM 1st MAY, 1887, to 30th APRIL, 1888.

Months.	GRANZA.		TIERRAS.		TOTALS.	
	TONS.	POUNDS	TONS.	POUNDS	TONS.	POUNDS
1887.						
May.....	602	1320	2173	600	2775	1920
June.....	586	880	2584	1220	3171	100
July.....	483	1800	2380	640	2869	440
August.....	519	1940	2700	1120	3220	1060
September.....	397	780	2403	540	2800	1320
October.....	470	760	2420	1120	2890	1880
November.....	474	500	2400	140	2874	640
December.....	549	560	1858	880	2407	1440
1888.						
January.....	479	840	961	220	1440	1060
February.....	485	780	1645	1520	2131	300
March.....	441	700	1805	1420	2247	120
April.....	475	1700	1852	1220	2328	920
Totals.....	5971	560	25186	640	31157	1200

STATEMENT

OF THE NUMBER OF TONS OF ORE OF ALL
QUALITIES **Reduced** AND FLASKS OF QUICK-
SILVER **Produced** AT THE NEW ALMADEN
MINES, FROM 1st MAY, 1887, TO
30th APRIL, 1888.

Months.	GRANZA.		GRANZITA AND TIERRAS.		TOTALS.		AV'G PER CT.	FLASKS QUICK- SILVER.
	TONS.	POUNDS	TONS.	PDS.	TONS.	PDS.		
1887.								
May...	610	400	2,408		3,018	400	2.58 ⁵	2,040
June...	689	1,700	2,298	1,000	2,988	700	2.17 ⁸	1,700
July...	248	800	2,220		2,468	800	2.42 ⁸	1,567
August.	265	400	2,228		2,493	400	8.32 ⁷	1,517
Septem.	324	1,500	1,922	1,000	2,247	500	2.61 ³	1,535
October	335	200	2,189		2,524	200	2.12 ⁹	1,405
Novem.	307	1,000	2,147		2,454	1000	1.90 ⁹	1,225
Decem.	768	800	2,410		3,178	800	2.58 ⁹	2,152
1888.								
January	892	1,900	1,544	1,000	2,437	900	4.15 ⁸	2,650
Febr'y.	405	800	1,200		1,605	800	4.12 ¹	1,730
March..	343	600	1,803		2,146	600	2.49 ⁶	1,400
April..	498		1,780		2,278		2.65 ¹	1,579
Totals..	5,689	100	24,150	1,000	29,839	1100	2.62 ⁷	20,500

OPERATIONS OF FURNACES

FROM 1st MAY, 1887, TO 30th APRIL, 1888.

Furnace No.	Time in Operation.		Class of Ore Roasted.	Quantity of Ore Roasted, Tons of 2000 lbs.		Quicksilver Produced Flasks of 76½ lbs.	Quicksilver in Pounds.	Per ct. Yield.
	Days.			Tons.	Lbs.			
Continuous 1	236		Granzita	8189				
			Granza	231		3073	235,084½	1.39 ⁵
“ 2	128		Granzita	2113	1000			
			Granza	261	1500	1239	94,783½	1.99 ⁵
“ 3	255		Tierras	9111		3078	235,467	1.29 ⁵
“ 8	200		Tierras	4737		1686	128,979	1.36 ¹
“ 7	345		Granza	3184	1600	7062	540,243	8.48 ¹
“ 9	157		Granza	1486	1000	3050	233,325	7.84 ⁵
Intermit'nt 6	23		Granza	525		1312	100,368	9.55 ⁵
Totals.....	1344			29839	1100	20500	1,568,250	2.62 ⁷

Ores Roasted.....59,679,100 pounds or 29,839 $\frac{1}{2}$ tons

Quicksilver Produced, 1,568,250 “ “ 784 $\frac{2}{3}$ “

Total product of the Mines on the Company's property from July 1850 to 30th April, 1888, 880,718 flasks or 67,374,927 Pounds.

STATEMENT AND BALANCE SHEET

OF THE

QUICKSILVER MINING CO.

STATEMENT OF THE BUSINESS OF THE QUICKSILVER MINING COMPANY,

For the Year ending April 30th, 1888.

To Quicksilver and Ore on hand as per last Yearly Report	\$186,375.	\$12,880.81	\$199,255 81
Cost of Quicksilver produced and Ore mined in year from April 30th 1887, to April 30th, 1888,			
Mine Pay Rolls	\$297,607 16		
Hacienda Pay Rolls	53,990 86		
Working Supplies	116,420 16		
Sundry Expenses	19,925 67	\$487,943 85	
Legal Expenses		610 00	
General Expenses		12,166 98	
Exchange		433 40	
Interest		282 71	
Taxes		4,778 50	
Improvements, Renewals, &c.		12,146 01	
Dividend 1½% on Pref'd Stock, Aug. 15, '87		64,369 50	
" " " Feb. 1, '88		85,826 00	
" " " April 30, '88		85,826 00	
Balance Credit Income Acct. April 30, '88		2,012 20	00
			\$2,965,958 76

NEW YORK, April 30th, 1888.

THE QUICKSILVER MINING COMPANY, BALANCE SHEET.

APRIL 30th, 1888.

Dr.	Cr.
To Real Estate and Mining Property, Houses and Lands, Furnaces, Machinery, Tools, &c.....\$11,660,081 63	Capital Stock, Preferred...\$4,291,300 00
" Cash—	" Common... 5,708,700 00
Mechanics' Bank.....\$3,511 07	Income... ..\$10,000,000 00
Bank of California.....82,620 43	2,012,320 00
" Materials and Supplies..... 86,131 50	
" Ore..... 46,842 82	
" Quicksilver..... 42,864 55	
176,399 50	
	<u>\$12,012,320 00</u>
New York, April 30th, 1888.	<u>\$12 012,320 00</u>

24

REPORT

OF THE

WICKSILVER MINING Co.

FOR THE YEAR ENDING APRIL 30th.

1889.



T H E

Quicksilver Mining Company.

ANNUAL REPORT,

(With Tables and Tabular Statements.)

SUBMITTED AT THE

Annual Meeting of the Stockholders,

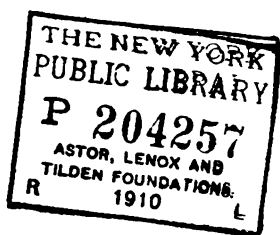
Held in New York, June, 1889.

NEW YORK :

D. MURPHY'S SON, PRINTER, 65 FULTON STREET,

1889.

11.5



DIRECTOR AND OFFICERS

Quicksilver Mining Company.

HARTFORD, CONNECTICUT & NEW YORK.

Elected June, 1898.

BOARD OF DIRECTORS.

DAVID H. HARTY.

GEORGE W. BUTTS, JR.

GEORGE W. BUTTS, JR.

DIRECTORS.

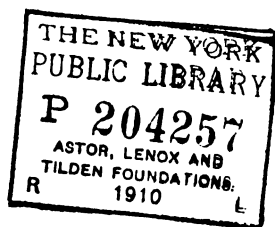
DAVID HARTY.....
GEORGE W. BUTTS, JR.....
JAMES D. SMITH.....
EDWARD BRADMAN.....
SAMUEL W. MORGAN.....
CHARLES FINE.....
F. S. LAWRENCE.....
SHEPARD GALT.....
FRANK K. STICKER.....
GEORGE C. HAYES.....
JOSEPH M. BANK.....

TREASURER

F. S. LAWRENCE,

SECRETARY,

M M W & O



DIRECTORS AND OFFICERS

OF THE

Quicksilver Mining Company,

CHARTERED BY THE STATE OF NEW YORK.

Elected June, 1889.

PRESIDENT.

DAVID MAHANY,

VICE PRESIDENT,

GEORGE W. BUTTS, JR.

DIRECTORS,

DAVID MAHANY,.....	.....New York.
GEORGE W. BUTTS, JR.....	.....Providence, R. I.
JAMES D. SMITH,.....	.....New York.
EDWARD BRANDON,.....	“
SAMUEL W. BOOCOCK,.....	“
CHARLES FRIES,.....	“
F. N. LAWRENCE,.....	“
SHEPPARD GANDY,.....	“
FRANK K. STURGIS,	“
GEORGE G. HAVEN,.....	“
JOSEPH MILBANK,.....	“

TREASURER,

F. N. LAWRENCE,

SECRETARY,

M. M. WEED.



~~THE~~ QUICKSILVER MINING COMPANY.

(For the year ending April 30, 1889
The 'Cover to p 8')

~~PRESIDENT'S REPORT~~

To the Stockholders of the Quicksilver Mining Co.:

GENTLEMEN

I transmit herewith Reports of the Manager and of the Superintendent at the mines, both of which are so complete as to enable you to fully understand the present condition of your property.

You will learn from them that everything in and about the mines and Hacienda has been maintained at the same high standard which has characterized the management in years past, and you may safely take assurance from this fact that the results reached will be, hereafter as heretofore, the very best attainable.

The amount of quicksilver produced during the past year, 15,200 flasks, is less than in some former years. The reasons why are clearly shown by the reports and carefully tabulated statements of the Manager and of the Superintendent. This loss is, however, largely compensated for by the considerable increase in price of our product. That this price will increase still more during the current year seems almost certain.

Printed herewith will be found the Financial Statement for the year just closed, which will, I hope, be found satisfactory.

Respectfully submitted,

DAVID MAHANY,

President.

307a.

STATISTICS

APPENDIX TO

MANAGER'S REPORT

1888-89.

EARNINGS AND EXPENSES

From May 1st, 1888, to April 30th, 1889.

From :

15,300 flasks Quicksilver, averaging.	
\$39.62 ⁴ per flask	\$602,288 14

18,082 flasks sold at an average	
of \$38.44 ⁸	\$695,207 64

Less :

4,969 flasks product of pre-	
vious 12 mos. unsold	
April 30th, 1888, then	
valued at \$35.50 and	
now counted sold at	
that rate	176,399 50

Leaving :

13,113 flasks of product for	
12 mos. ending April	
30th, 1889, sold at an	
average of \$39.56 ⁴	\$518,808 14

1,057 flasks are in Califor-	
nia, valued at \$40 ..	42,280 00

1,030 flasks are consigned	
abroad valued at \$40. 41,200 00	\$83,480 00

15,200 flasks Quicksilver	
produced av'ge \$39.62 ⁴	\$602,288 14
Rents and Miscellaneous	20,802 58

Total earnings	\$623,090 72
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Total Earnings brought forward.. \$623,090 72

EXPENSES:

For Mine Pay Rolls	\$284,664 27	
“ Hacienda Pay Rolls	54,620 06	
“ Taxes and Miscellaneous (in- cluding \$848.50 expenses in defending suit of Soto, an injured miner).....	28,311 72	
For Supplies consumed for cur- rent operations at Mine and Furnaces.....	104,037 74	
		<hr/>
Total expenses		\$471,633 79
Difference		<hr/> \$151,456 93
Less:		
Decrease in Ore on hand at Furnaces..	\$19,833 25	
Net Earnings		<hr/> <hr/> \$131,623 68

ACCOUNT OF SUPPLIES

From May 1st, 1888, to April 30th, 1889.

The changes in supplies have been as follows :

Balance April 30th, 1888.....	\$46,842 82
Purchased during 12 months ending April 30th, 1889.....	\$98,540 82
Less : Sales.....	2,597 35
	<hr/>
	\$95,943 47
	<hr/>
	\$142,786 29

Consumed for general operations :

At the Mine.....	\$67,382 76
At the Hacienda.....	36,654 98
	<hr/>
	\$104,037 74
Balance April 30th, 1889.....	\$38,748 55
	<hr/>
	\$142,786 29
	<hr/>

MONTHLY PRODUCTION OF QUICK- SILVER

FROM MAY 1ST, 1888, TO APRIL 30TH, 1889.

1888.

May	1,610	Flasks.
June	1,500	"
July	1,100	"
August	1,109	"
September	1,178	"
October	1,269	"
November	1,400	"
December	1,475	"

1889.

January	1,200	"
February	820	"
March	1,290	"
April	1,249	"

Total	15,200	Flasks.
-------------	--------	---------

QUICKSILVER PRODUCTION IN CALIFORNIA.

PRICE.				PRICE.			
1887.	FLASKS.	HIGHEST.	LOWEST.	1888.	FLASKS.	HIGHEST.	LOWEST.
May	2,830	\$39.	\$38.	May	3,037	\$38.	\$37.25
June	2,822	39.	37.50	June	2,956	38.	37.25
July	2,820	37.50	37.	July	2,359	37.50	37.
Aug.	2,881	37.	36.50	Aug.	2,547	37.25	37.
Sep.	2,923	38.	37.	Sep.	2,348	43.	37.
Oct.	2,859	37.	37.	Oct.	2,635	44.	43.
Nov.	2,613	37.	37.	Nov.	2,604	43.	42.50
Dec.	3,485	48.	44.	Dec.	2,739	43.	41.50
1888.				1889.			
Jan.	3,949	48.	42.	Jan.	2,221	43.	41.50
Feb.	2,733	43.	39.	Feb.	1,670	42.	41.50
Mar.	2,481	40.	38.50	Mar.	2,095	41.50	40.
Apr.	2,862	38.50	38.	Apr.	2,133	41.	40.
Total	35,258	\$48.00	\$37.00	Total	29,344	\$44.00	\$37.00

PLUGS - 2.0

WIRE - 2.0

WIRE - 2.0

WIRE - 2.0

WIRE - 2.0

WIRE - 2.0

WIRE - 2.0

WIRE - 2.0

WIRE - 2.0

WIRE - 2.0

WIRE - 2.0

WIRE - 2.0

WIRE - 2.0

QUICKSILVER PRODUCTION IN CALIFORNIA.

PRICE.				PRICE.			
1887.	FLASKS.	HIGHEST.	LOWEST.	1888.	FLASKS.	HIGHEST.	LOWEST.
May	2,830	\$39.	\$38.	May	3,037	\$38.	\$37.25
June	2,822	39.	37.50	June	2,956	38.	37.25
July	2,820	37.50	37.	July	2,359	37.50	37.
Aug.	2,881	37.	36.50	Aug.	2,547	37.25	37.
Sep.	2,923	38.	37.	Sep.	2,348	43.	37.
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Apr.	2,862	38.50	38.	Apr.	2,133	41.	40.
Total	35,258	\$48.00	\$37.00	Total	29,344	\$44.00	\$37.00

FLUCTUATIONS IN PRICE OF QUICK-SILVER IN LONDON.

1889.	ROTHSCHILD.	1889.	OUTSIDERS.
Jan. 1	£ 9.10	Jan. 2	£ 8.10
		“ 2	“ 8.14
		“ 4	“ 8.15
		“ 9	“ 8. 7.6
		“ 9	“ 8.10
		“ 23	“ 8. 4
		“ 23	“ 8. 5
Feb. 5	“ 8.—	Feb. 5	“ 7.17.6
“ 6	“ 7.10	“ 5	“ 7.12.6
“ 6	“ 8.—	“ 6	“ 7.15
“ 8	“ 8.10	“ 8	“ 8. 2.6
		“ 8	“ 8.—
		“ 15	“ 7.15
		Mar. 4	“ 7.12.6
Mar. 6	“ 7.10	“ 6	“ 7.10
		“ 6	“ 7. 6.6
		“ 9	“ 7. 9
“ 11	“ 7.15	“ 11	“ 7.10
		“ 11	“ 7.12.6
		“ 20	“ 7. 7.6
		“ 21	“ 7.10
		“ 25	“ 7. 8
		“ 25	“ 7.10
Apr. 1	“ 7.12.6	Apr. 1	“ 7.12.6
“ 8	“ 7.15	“ 4	“ 7.15
“ 10	“ 8.—		
May 9	“ 8. 5	May 4	“ 7.18
“ 9	“ 8.10	“ 9	“ 8. 2.6

QUICKSILVER PRODUCTION IN CALIFORNIA.

PRICE.				PRICE.			
1887.	FLASKS.	HIGHEST.	LOWEST.	1888.	FLASKS.	HIGHEST.	LOWEST.
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Apr.	2,862	38.50	38.	Apr.	2,133	41.	40.
Total	35,258	\$48.00	\$37.00	Total	29,344	\$44.00	\$37.00

FLUCTUATIONS IN PRICE OF QUICK- SILVER IN LONDON.

1880.	1881.	1880.	1881.
Jan. 1.....	£ 9.10	Jan. 2.....	£ 8.10
		" 2.....	" 8.14
		" 4.....	" 8.15
		" 9.....	" 8.7.6
		" 9.....	" 8.10
		" 20.....	" 8.4
		" 22.....	" 8.3
Feb. 5.....	" 8.—	Feb. 2.....	" 7.17.6
" 6.....	" 7.10	" 3.....	" 7.12.6
" 6.....	" 8.—	" 4.....	" 7.15
" 8.....	" 8.10	" 8.....	" 8.2.0
		" 8.....	" 8.—
		" 15.....	" 7.15
Mar. 6.....	" 7.10	Mar. 4.....	" 7.19.6
		" 6.....	" 7.10
		" 6.....	" 7.6.0
" 11.....	" 7.15	" 9.....	" 7.—
		" 11.....	" 7.10
		" 11.....	" 7.12.6
		" 20.....	" 7.7.6
		" 21.....	" 7.10
		" 25.....	" 7.—
		" 25.....	" 7.—
Apr. 1.....	" 7.12.6	Apr. 3.....	" 7.—
" 8.....	" 7.15	" 4.....	" 7.—
" 10.....	" 8.—		
May 9.....	" 8.5		
" 9.....	" 8.10		

SUPERINTENDENT'S REPORT

FOR THE FISCAL YEAR 1888—1889.

QUICKSILVER PRODUCTION IN CALIFORNIA.

PRICE.				PRICE.			
1887.	FLASKS.	HIGHEST.	LOWEST.	1888.	FLASKS.	HIGHEST.	LOWEST.
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Jan. 1	£ 9.10	Jan. 2	£ 8.10
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		" 4	" 8.15
		" 9	" 8. 7.6
		" 9	" 8.10
		" 23	" 8. 4
		" 23	" 8. 5
Feb. 5	" 8.—	Feb. 5	" 7.17.6
" 6	" 7.10	" 5	" 7.12.6
" 6	" 8.—	" 6	" 7.15
" 8	" 8.10	" 8	" 8. 2.6
		" 8	" 8.—
		" 15	" 7.15
Mar. 6	" 7.10	Mar. 4	" 7.12.6
		" 6	" 7.10
		" 6	" 7. 6.6
		" 9	" 7. 9
" 11	" 7.15	" 11	" 7.10
		" 11	" 7.12.6
		" 20	" 7. 7.6
		" 21	" 7.10
		" 25	" 7. 8
		" 25	" 7.10
Apr. 1	" 7.12.6	Apr. 1	" 7.12.6
" 8	" 7.15	" 4	" 7.15
" 10	" 8.—		
May 9	" 8. 5	May 4	" 7.18
" 9	" 8.10	" 9	" 8. 2.6

SUPERINTENDENT'S REPORT

FOR THE FISCAL YEAR 1888—1889.

NEW ALMADEN, Cal.,

May 15th, 1889.

J. B. RANDOL, Esq., Manager,

DEAR SIR:

I have the honor to submit herewith my report on the condition of the mines and works under your charge for the fiscal year 1888-9.

PRODUCTION.

From the tabular statements, which form the appendix, it appears that 96,223.65 tons of material have been extracted from the mines during the year 1888-9.

104,490.63 tons had been extracted during 1887-8.

A comparison of the two shows a decrease of 8,266.98 tons.

The tonnage of 1888-89 is divided as follows:

From ore chambers (labores)	61,273.55 tons.
From dead work and prospecting.....	34,950.10 “

Total as above	96,223.65 “
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The 61,273.55 tons extracted from the ore chambers, after being cleaned, netted:

Granza	4,731.50 tons.
Tierras	19,459.97 “

Total	24,191.47 tons of ore.
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or $39\frac{48}{100}$ per cent. of the material extracted from ore chambers.

From surface workings and from old mine dumps were obtained :

Granza	19.79 tons.
Tierras	4,833.82 “

Total	4,853.61 tons of ore.
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These two totals give an aggregate of 29,045.08 tons of ore, which were shipped to Hacienda for reduction.

Comparing this ore production with that of the previous year :

31,157.60 tons of ore in 1887-88.

29,045.08 “ “ “ “ 1888-89.

It shows a decrease of 2,112.52 tons, of which there were less produced :

From new works	688.42 tons.
From old mine and dumps	1,424.10 “

Total decrease	2,112.52 tons of ore.
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The furnaces reduced during the year 1888-89 :

Granza	5,008.20 tons.
Tierras	23,853.00 “

Total	28,861.20 tons of ore.
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In 1887-88 29,839.55 tons of ore were reduced, which shows a decrease of 978.35 tons; of these 680.85 tons less were Granza, and 297.50 tons less were Tierras.

The 28,861.20 tons of ore reduced by the furnaces in 1888-89 yielded 15,200 flasks of quicksilver of 76½ lbs. each, or an average of 2,014 per cent. of quicksilver from each ton of ore roasted.

In 1887-88 the average percentage has been 2,627, showing a decrease of 0.613 per cent. for 1888-89.

UNDERGROUND DEVELOPMENT, PROSPECTING.

The amount of drifting and sinking done in the mine during 1888-89 is 10,994 feet, or two miles and 434 feet.

This is distributed as follows :

Randol Shaft from 54 points	3,235	feet.
Buena Vista Shaft from 3 points	427.5	"
Santa Isabel " " 6 "	1,317.5	"
Saint George " " 12 "	1,290.	"
Almaden " " 7 "	1,364.5	"
Prospect Shafts " 5 "	817.	"
Day Tunnel " 4 "	1,380.5	"
Miscellaneous " 6 "	1,162.	"

Total from 97 points.....10,994 feet.

Much new ground has been opened up by these explorations, the ore discoveries, however, have been few.

As a general review of the year's operations and events will be of interest, I shall restate in a condensed form, such portions of the monthly reports as are important to illustrate the condition of the mine during the past twelve months.

This will more clearly show what steps have been taken to insure a continuance of the ore supply.

RANDOL SHAFT.

This shaft has maintained its prominence as ore producer, and as it controls the most valuable portion of the mining ground, most of the year's prospect work has been done from its levels.

900 LEVEL.

The Winze (O 3) started in April, 1888, was continued 48 feet through alta and connected with the 1000 level.

1000 LEVEL.

East (23) was continued 30 feet on contact with vein and alta, when a crosscut of 18.5 feet was made to connect with winze (O 3), 34 feet were then drifted on vein and alta; the vein showing trace of metal.

Raise (J 3) was made in the Eastern ground on vein which showed low grade ore; 50 feet were upraised on small branches of ore, followed by 78.5 feet of drift on fair grade ore, and another raise of 19 feet made connection with old labor LX. The ore found was stoped by tributers and is now worked out.

1100 LEVEL.

Northeast Drift (16) was continued 128.5 feet, at which distance connection was made with drift from the Day Tunnel incline.

Nothing of value was developed.

East (84) Crosscut South to prospect the ground South of the explored North vein 72 feet were driven through serpentine, when alta was found. This crosscut still continues.

1200 LEVEL.

No prospect work was done from this level. In the East labor 4 feet were upraised to start a connection with the 1100 level to be used for air. Tributers are working in this old labor.

1300 LEVEL.

West Raise, 15 feet were upraised to prospect a branch of ore which looked promising for a time. It was worked by tributers, but soon gave out.

Another Raise (M_3) also on a branch of ore, 19.5 feet were upraised when the ore disappeared.

North, a Raise of 9 feet was made through ore and connected with old labor above; this also is worked out. To assist tributers 20.5 feet were sunk in old labor XV. to form an ore chute to the 1400 level. The ore is now exhausted.

West, Winze (Q_3) about 60 feet East of (M_3) 75 feet were sunk, the first 8 feet through good ore, 12 feet in low grade ore, then 49 feet on contact of barren vein and alta, when the vein disappeared. Following the contact of serpentine and alta for 6 feet more, there was little encouragement for continuation and the winze stopped.

1400 LEVEL.

An intermediate drift was run from the old labor LXI. through solid vein in the hope of finding ore. Nothing of value was developed.

North Sink (S_3), to connect with labor LXI. for ventilation. 45 feet were sunk, of which 23 feet in fair grade ore which was taken out by footage contract. The ore body extended a short distance above the 1400 level and stoping was discontinued as the ore disappeared.

North Raise on small branches of ore, West of, (S_3) 12 feet were upraised. Tributers are still at work to break the small scattered veins of metal.

North Raise (U_3) went up on a branch of ore, which improved as it continued; 119.5 feet were raised when the vein became barren and the upraise stopped.

The ground was worked by footage contract for a time and some good ore was obtained. The ore body had a very small lateral extension and is worked out.

North Winze (P_3) was sunk to connect with the West branch of labor LXI. for ventilation. Some good ore was passed through. The labor is now abandoned.

North Drift (4) was extended in a Northeasterly direction about 170 feet on contact with vein and alta with some fair ore in a few places, from which (P_3), (S_3) and (U_3) were developed. The vein then made a sudden turn Southeasterly in much broken and barren ground. The whole distance advanced is 323.5 feet, the face of the drift in a very hard vein without any indications of metal.

1500 LEVEL.

North Intermediate (83) from winze M. 74.5 feet were drifted in a Northerly direction to prospect a pillar of ground between two old labors 36.5 feet were driven through broken vein without ore, and 38 feet through alta, when serpentine was reached and the drift was stopped as unfavorable.

North Drift (5 B) was started on a branch vein. 37.5 feet were drifted, showing traces of ore in the first 20 feet. It finally entered serpentine and stopped.

North Raise (Y_3) was started from drift (5 b). It continued up on vein with small branches of ore that continued for the whole distance of 81 feet.

West Sink (T_3) was started from the West labor; 28 feet were sunk to serpentine. Some ore was taken out.

West Raise from old labor IX. 21 feet were raised and 29 feet were drifted to assist tributers. Good metal was found and appears to continue. Tributers are still working in the labor.

West Drift (39 B). This is the continuation of the 1,500 level West; 190.5 feet were drifted. The vein is much broken and faulted. No ore was found. Much carbonic acid gas flows from the present face of the drift and work is stopped;

the indications are very poor as the 1400 West Santa Isabel extends much beyond this, and only barren vein has been found.

West Raise (R_3) was started to connect with the sink (R_3) from the 1400 West Santa Isabel, and made necessary to ventilate both drifts.

68 feet were upraised and 74.5 feet sunk to connect. No ore was found.

West Drift (39 C) is on a branch vein from the main West drift. 37 feet were advanced when the vein disappeared in alta ground. West Raise (B_4) started on the opposite side of the main West Drift on the same branch of vein; 33.5 feet were upraised with the last 3 feet in fair grade ore.

West Crosscut (82) from Labor LXVI. This labor having alta ground for foot wall, the crosscut was started to the South in the hope of finding another productive vein underlying the alta. 83.5 feet were drifted when contact of serpentine and alta was found, with a small vein, which did not promise well. Continuing 6 feet on this vein the crosscut was stopped.

West Raise from Labor LXV. was started on the Eastern end of the labor on a branch of metal to assist a company of tributers in opening the ground. 44.5 feet were upraised in a Southeasterly direction and some good metal was broken, when the vein became so poor that work was stopped.

East Drift (123 A) from 1,500 Intermediate West. 82.5 feet were drifted. The first 20 feet through vein, the balance of the distance on contact of vein and alta. No ore was found.

A branch drift was run from the 1500 Intermediate West to prospect a branch of ore. It developed well for a short distance when the vein made a sudden turn East towards

(123 A) which was only a few feet distant. The drift was stopped. 17.5 feet had been drifted and good ore was obtained in the beginning.

West Sink from 1500 West Intermediate. 12 feet were sunk on the continuation of the vein. The development was unsatisfactory and the sinking was stopped.

1600 LEVEL.

North Sink (W_3). 66 feet were sunk on vein showing traces of ore for 15 feet. Vein then disappeared and the contact of alta and serpentine was followed 11 feet. The sinking was stopped. Men are working now on tribute in the adjoining ground.

North Crosscut ($_6B$). This crosscut was intended to prospect for the vein, found in the 1700 North and enclosed by walls of serpentine. 51 feet were driven in a Northerly direction without favorable results and the crosscut was stopped.

West Crosscut (10) situated below the 1550 labor. 28 feet were drifted in vein showing traces of ore for 18.5 feet. The last 9.5 feet run into serpentine and the work was stopped.

West Raise (X_3) on contact of vein and alta to prospect for the ore bearing ground of the 1500 West labor. 58 feet were upraised to the intermediate drift without disclosing ore.

West Drift ($_{10}B$) was run on a branch vein 58.5 feet on contact of vein and alta when it connected with old level by a sudden turn. No ore was developed.

West Sink (I_3) continued from last year's work 35 feet to the 1700 level, with which it connected by a crosscut 34 feet long.

Two intermediate drifts were run from (I_3); the East drift 41 feet on vein and alta without ore; the West drift 34.5 feet, of which the first six feet showed ore, but not in paying quantities.

West Crosscut North was run 78 feet through alta to prospect for a possible vein in the Northern ground, as indicated by the 1700 level.

1700 LEVEL.

North Crosscut ($_{12}A$). This was started to prospect for the extension of the new vein, discovered last year in sinking winze (F_3) and worked ever since as a labor under footage contract.

This vein has improved much since the work started and carries cinnabar as well as native quicksilver, the latter generally predominating in quantity. The crosscut was started in serpentine 10 feet North of Winze (F_3) and reached the vein at a distance of 10 feet. It was continued 17 feet through vein of the same character as found in Winze (F_3), when the footwall of serpentine was reached and the crosscut was stopped.

The vein was immediately opened North and South as a labor.

From the 1700 level North another crosscut ($_{12}B$) was started about 70 feet farther North. Drifting Easterly through serpentine 25 feet the vein was reached, 15 feet ran through vein to the footwall of serpentine, into which the drift penetrated 8 feet and stopped. To improve the

ventilation a drift on the vein was run Southerly 64 feet and connected with the labor from (_{1,2}A). Another branch drift from (_{1,2}B) was run Northerly on vein and broke at the distance of 16.5 feet into the footwall of old labor XXVII. The vein shows indications of continuing further North and appears to underlie the vein formerly stoped in the old labor.

1800 LEVEL.

West drift (78) from Labor XLVI A. 120 feet were drifted on a branch of metal, when vein disappeared. Much good metal was broken by a company of tributers. It is now worked out.

North intermediate drift from (F_3) winze, on contact of vein and serpentine to meet the upraise (Z_3) for ventilation, 43 feet were drifted.

North raise (Z_3) on a branch of metal, which improved much as it advanced; 57 feet were upraised and fair grade ore with much native mercury was found.

North sink (N_3) started last year was continued down to the 1900 level. The first 31 feet passed through low grade ore, 49½ feet on contact of vein and alta with traces of metal. Some metal was broken from the adjoining ground.

North winze (A_4) was sunk on contact of vein and serpentine 75 feet, with traces of ore most of the way.

North drift (18 D) followed a branch of vein and some low grade ore was obtained.

North raise near winze (G_1) on branches of metal worked by tributers; 15 feet were upraised when the outlook became unfavorable and work stopped. The place is worked out.

North crosscut (109 C) started about 70 feet West from foot

of winze (N_3) and continued (62.5) when it reached alta and stopped. The first 30 feet were in vein matter with traces of metal.

BUENA VISTA SHAFT.

This shaft has continued its function as Pump Shaft and but little prospecting has been done from its levels.

2000 LEVEL.

East drift (307) from incline. This was continued 233.5 feet on contact of vein and alta, when the vein made a sharp turn South and disappeared in serpentine; 60 feet were cross-cut through serpentine when further drifting stopped. The vein had a good appearance and traces of metal were found in several places, which encouraged to prospect further. A crosscut South was made through vein and vein matter for 37 feet, but developed only traces of metal. A branch vein near the East end of the vein was drifted on for 22 feet, when it also disappeared in alta.

2100 LEVEL.

West drift (308) was run on the vein, which crosses the main crosscut about 300 feet South from the shaft; 75 feet were drifted on vein and alta. The vein was much contorted but of favorable character, and showed traces of metal. Some hydro carbon gas was met with and the drift was stopped.

SANTA ISABEL SHAFT.

South drift (114) was extended on the vein which here takes a Southerly course with dip West. This direction and dip led to the belief that the vein is related to the system developed from the Washington Shaft, especially the vein on the 1000 level, which in its Southerly extension showed branches of metal, and gave hope that productive ground

would be found by pushing in that direction. The face of the drift, when it started, was about 3300 feet from the shaft, and tramping had to be done by mules; 444.5 feet were drifted during nine months, keeping the contact of vein and alta nearly for the whole distance, the vein showing at times traces of metal that gave encouragement. Large quantities of gas were met with, and as the drift had penetrated far to the South, beyond the Washington Shaft without ore, it was stopped. A branch vein running Southwesterly was also prospected for a distance of 18.5 feet.

West drift (104) on the continuation of the productive vein which developed the rich ore chute in Saint George ground, was followed 450.5 feet. It showed traces of metal at times, but was mostly barren, when it finally disappeared altogether, leaving only contact between serpentine and alta. This contact was continued for 59.5 feet and the work stopped.

Southwest crosscut (108) towards America Shaft continued 15 feet during May, when such large volumes of carbonic acid gas were found that the drifting in this direction had to be stopped and a bulkhead was built to keep back the gas. An eight foot suction fan was constructed at the mouth of the crosscut, the entrance of the car track was closed by a door and two Baker blowers on the surface forced air by an eleven inch pipe to the face, while a ten by twenty inch air box drew fresh air from the station at the shaft; by these means the air near the face was kept sufficiently clear to allow work; the foul air, however, as drawn by the eight foot suction fan, lodged in the straight crosscut and checked the draft, and a twelve foot suction fan had to be erected over the mouth of the Washington Shaft to produce the desired ventilation. A branch drift South was then started from a point near the bulkhead and about 200 feet from the face of the drift, and 87 feet had been continued in this

direction when the accident to the America Shaft stopped all further progress. A bulkhead of brick and cement was then constructed 700 feet from the mouth of the drift to check the flow of the carbonic acid gas, which otherwise would interfere with the ventilation of other parts of the mine.

Crosscut South (124) from East drift. To prospect for the continuation of the West labor of the 1500 Randol level which, lying between walls of alta, had passed under the 1400 level, this crosscut was continued Southerly 85 feet through serpentine when alta was found; 55 feet were run through alta when petroleum and bitumen was encountered similar to a formation found in the 1400 crosscut South from the shaft. This similarity led to the abandonment of further drifting in this direction. A branch was then started Easterly on contact of serpentine and alta, which turned sharply North and West and 28 feet were drifted.

AMERICA SHAFT.

The sinking of this shaft had been stopped in March, 1888, on account of the large quantity of water, which exceeded the pump's capacity. It was expected that this water would drain off as soon as the 1400 crosscut from the Santa Isabel had sufficiently advanced. In June, 1888, this crosscut had advanced to within 400 feet when the accident occurred that lost the shaft. A full statement of the accident was given in the monthly report. The shaft is now open to the 600 level; below this it has come together for probably 200 feet. The shaft had to be abandoned and with it the work for the present time. All machinery and boilers, gallows frame and shaft house were taken away, and the top of the shaft has been closed.

ST. GEORGE SHAFT.

1000 LEVEL.

After establishing a station a crosscut (352) was run North to intercept vein; 284 feet were drifted. A serpentine

formation was found 20 feet thick at the distance of 245 feet with alta beyond and some water. A branch drift (352 A) was run East on contact of serpentine and alta 55 feet without signs of vein. The drift was stopped.

Crosscut (353) East was started then and 176 feet were drifted through alta when vein was found and followed in an Easterly direction. This vein has a Southern dip; 49.5 feet were drifted on vein that shows traces of metal.

North Sink (H_3) was made to connect with the 1100 level for ventilation; 100 feet were sunk, the last 15 feet passed through vein which showed traces of ore.

1100 LEVEL.

East Drift (351) from Raise. 81.5 feet were drifted on vein and alta. West Drift (351 A) ran 44 feet on fair ore and is now worked as footage labor.

1200 LEVEL.

East Drift (350 A) was continued on vein 341 feet. It ran into the Federico labor and developed some low grade ore that was broken by tributers.

East Raise (v. 3) made 63.5 feet up from last drift. Some low grade ore was obtained, and connection made with 1100 level from Randol shaft.

A Drift and raise 31 feet long was made West of the 1200 crosscut on contact of vein and alta. Traces of ore were seen in the first five feet. Work has been stopped.

West Sink (L 3) was continued 9 feet in rich ore, and is now worked by tributers.

To facilitate hoisting a station with dump plat has been excavated at 1200 level and fork sunk 6 additional feet. A skip road and skip has been put in shaft in place of kibble.

DAY TUNNEL.

The incline was continued 170 feet through alta, at which depth, corresponding with the 1100 level Randol, the cross-cut Southwesterly was begun. Contact of alta and serpentine was found at 65 feet. This contact was followed by two drifts, one going northwesterly, the other Southeasterly in the hope of finding vein. 646.5 feet were drifted Southeast and 334 feet Northwest without finding vein. Both drifts had shown from time to time such changes in formation as would lead to expectations that vein should be found.

CORA BLANCA.

800 level. To prospect for the continuation of the ore chute the drift was opened and 42 feet were run in a Southerly direction. Traces of metal were found.

SOUTH SAINT GEORGE.

58.5 feet were upraised from this tunnel in vein to surface. From the upraise an intermediate drift was run Easterly 105 feet in vein and crosscuts North and South were made; only traces of metal were found.

ALMADEN SHAFT.

This shaft is situated 1025 feet South from the Saint George Shaft. Its collar is 275 feet below the top of Mine Hill. It is a two compartment shaft 4 feet by 9.5 feet in the clear. One compartment is for hoisting, the other for pumping, should it become necessary. One baby hoisting engine and one horizontal steam boiler provides the power. The shaft house has space enough for larger machinery, should it be required.

The location of this shaft has been determined with the view to find and explore the vein that had been partly opened by the San Pedro and the Santa Mariana and possibly to reach

the San Francisco vein which trends in its direction. In the four months from August to November 484.5 feet were sunk, the upper part in alta, the last 187 feet in serpentine. Sinking was then stopped, and the 500 level was opened about 230 feet from the surface. A crosscut Southwest (400) and another Southeast (401) were started in alta.

Crosscut Southwest ran 72 feet to serpentine and 10 feet into serpentine. The contact was then taken up and 79 feet were drifted on contact of serpentine and alta when it was observed that the direction went too far North and that the vein must be found back of the serpentine. The crosscut was started again and 15 feet were drifted through serpentine, 20 feet through alta and 126 feet more through serpentine when the vein was reached. 85 feet were crosscut through vein which developed some low grade ore for a distance of 15 feet. Some 3 tons of ore were taken out.

The Southeast crosscut (401) broke into serpentine from the beginning, and continued so for 246 feet, when vein was met. Going through vein 95 feet alta appeared. On this contact a drift Northerly (401 A) was run 90.5 feet but was abandoned when it changed its direction by a sharp turn to the South. From the point of deviation the drift was continued straight 16 feet in vein.

The crosscut (401) was continued, alta was soon lost and 44.5 feet were driven in vein that showed traces of ore.

BRIDGE TUNNEL.

This had been continued Northwest 73 feet through alta to vein, which was crosscut 26 feet. Not looking very favorable a branch drift was run Southerly 139.5 feet on contact of vein and alta, when a stronger vein made its appearance in the face. This vein was followed in a Northeasterly course 170 feet and only traces of ore were seen.

SYCAMORE TUNNEL.

This prospect tunnel is situated about 1750 feet West of the Santa Isabel Shaft. It runs into the vein which produced some metal from surface croppings, 233 feet were drifted, of which 60 feet were in vein matter and the balance of the distance in vein showing traces of metal. A branch drift of 12 feet was run into the part of the vein that looked most promising but nothing has been developed.

SODA SPRING TUNNEL.

A prospect tunnel on the South slope of the ridge and about 2800 feet Northwest of the American Shaft. Started under croppings of the vein 217 feet were drifted, the first 83.5 feet being through alta and broken vein matter; the remaining distance through vein, alta and serpentine so much broken and disturbed that the prospect was abandoned.

PROSPECT SHAFTS.

These shafts were sunk to prospect for the vein between the American Shaft and the Providencia. The shafts have two compartments, one for hoisting, the other for ladder-way, operated by horse-power. The timbering consists of two-inch plank.

Prospect Shaft No. 1 is located on the North side of the ridge, 2300 feet due West from Santa Isabel. It is 3.5 feet by 6.5 feet in the clear, sunk through greenrock 55.5 feet into sandstone. At the depth of 116.5 feet a strong flow of water came in. As it could not be kept dry by the power at hand further sinking was stopped with the intention of resuming later.

Prospect Shaft No. 2 is situated on the South side of the ridge about 1300 feet East of Providencia Tunnel. Its size

is the same as that of No. 1. Sinking 202.5 feet through alta, water was found on top of vein. The sinking was discontinued and a drift was run on contact of vein and alta 100.5 feet when vein disappeared. A crosscut of 18 feet through vein reached again alta and contact was followed 59.5 feet when the vein became very thin and work stopped. A new crosscut from shaft ran 23 feet through vein. No metal was found. The vein dips South and West. The shaft is kept dry by a pump worked by compressed air brought from Santa Isabel.

Prospect Shaft No. 3 was started after the cessation of work at Shaft No. 1. It is located on the North side of the ridge 1550 feet Northeasterly from No. 2. Its size is 3.5 feet by 7.5 feet. It had a depth of 233 feet when water was struck. The shaft is in alta ground with the exception of a small stratum of vein that crossed it near the surface. A crosscut South has been started and penetrated 64 feet through alta ground with sandstone boulders.

OLD OR TRIBUTERS LABORES.

Most of the old labores that were worked by tributers during the previous year are now abandoned. They have either been worked out as far as ore could be found or the remaining ore is of such low grade that it cannot be taken out with profit. Only two of these old labores are now exploited, employing 25 tributers. Many other small ore branches have been tried during the year, some with fair results. All the levels from the 1000 to the 1800 level, Randol inclusive, have contributed their share to the general output of ore. A few points are still worked, viz.: Between the 1100 and 1200, on the 1300, 1400, 1500, 1600, 1700 and 1800 levels of the Randol Shaft; their existence, however, must necessarily be of short duration. The small but rich ore chute below the

1200 level of the Saint George Shaft has been given over to tributers; very little productive ground remains.

NEW LABORES ON FOOTAGE.

The 1500 West Randol labor is still producing. It has nearly reached its limits and only 16 miners are employed there now.

On the 1700 and 1800 levels North Randol there are three labores, employing 28 men. The vein is peculiarly situated between walls of serpentine and carries largely native quicksilver. This ore body has been prospected from a point about 50 feet below the 1800 level to a point about 20 feet above the 1700 level and making towards the 1600 level, how far up is unknown. The native quicksilver is apparently distributed through the whole of the vein matter, but the ore is low grade generally, with occasionally rich spots.

On the 1100 level Saint George four miners have worked for the last four months. The ore chute is small and poor.

MACHINERY.

The hoisting and pumping engines at the different shafts are in good working condition.

At the Randol Shaft a new pinion wheel has been fitted to the shaft, the slide valve and linkwork were refitted, also the crosshead, the relief valve, main steam pipes and stop valves have been repaired.

At the Buena Vista Shaft the pump does its work smoothly, it runs at a very slow speed (3 strokes per minute). It raised 56,009,400 gallons of water during the year, against 72,593,800 gallons raised in 1887-8, showing an abatement of 16,584,400 gallons for the year. Fuel oil has been used for

firing the boilers. The 10-inch steam pipes and stop valves have been refitted and auxiliary steam pipe has been put in.

At the Santa Isabel Shaft a new cross head pin and brasses were fitted to the No. 7 Burleigh Air Compressor, 6-inch steam pipes and stop valves have been refitted.

At the Saint George Shaft the engine and boiler have been repaired and fitted with new material where necessary.

At the Day Tunnel Incline an extra reel and new reel shaft were fitted to the hoist. The hoisting machinery has now been removed and stored and is being repaired.

At the Almaden Shaft a hoisting engine and 50-horse power boiler has been erected. A steam engine and blower have been fitted up. New piston and reel were provided for hoisting engine.

At the Washington Shaft a twelve-foot exhaust fan was constructed and put in operation, driven by a steam engine, erected for the purpose.

For the Prospect Shafts three horse whims have been constructed and put in place.

5,000 feet of two-inch air pipe were laid from Santa Isabel Shaft to Prospect Shaft No. 2 and a pump placed in position underground. Three new skips have been built and two new iron cars. Six old iron cars have been fitted with steel axles, new wheels and trucks. One 8-foot exhaust fan has been built for the 1400 level Santa Isabel, one 18-inch blower for the 1500 West Randol and one 18-inch blower for the 1200 Saint George, together with the necessary motive apparatus. Three steam boilers have been thoroughly repaired, one for the Saint George, one for Day Tunnel and one for the Hacienda.

MISCELLANEOUS.

All of the company's buildings, roads, tracks, water pipes and tanks have been kept in good order and have received the necessary repairs. A new road has been constructed from the Randol Shaft to the Almaden Shaft, 2,200 feet long.

The wood road known as Skuse's road has been extended to the southwestern part of the company's wood lands a distance of 12,700 feet and one 60-foot and one 12-foot bridge have been constructed.

A contract has been awarded for the cutting of 4,000 cords of wood on the company's wood lands which will be hauled over this new road to the mine.

Shaft houses have been erected over each one of the Prospect Shafts and sheds over the horse whims.

A small Planilla shed has been erected near the Saint George Shaft. The line of fence separating the company's property from the Guadalupe Mine has been built new and repaired, the Guadalupe Mine paying half of its cost.

A new building has been erected near Randol Shaft, size 12x20 feet, for the storage of machinery.

Water pipes have been laid from the tank near the Washington Shaft to the Almaden Shaft.

The system of water pipe has been kept in good order.

HACIENDA REDUCTION WORKS.

The incline has received a thorough overhauling and the light rails of the lower half of the track have been replaced by heavy rails (50 lb.). A new water tank 75 feet long, 10 feet wide and 6 feet high has been built at a suitable

elevation for all furnace purposes, effecting a reduction of 26 feet in the height to which water had formerly been raised, thereby saving fuel.

An electric plant, consisting of a four-horse power dynamo and motor, has been erected at the engine house to work the suction fan for furnaces Nos. 1 and 2 across the creek, saving an extra engineer and boiler.

After some trials a soot machine has been invented, which now cleans all the soot from the condensers, attended by one man.

The furnaces have worked very satisfactorily, only small repairs have been made, such as replacing worn out tiles, condenser pipes, etc., and everything has been kept in a proper state of efficiency.

I am yours very respectfully,

F. VON LEICHT,

Superintendent.

STATISTICS
APPENDIX TO
SUPERINTENDENT'S REPORT
FOR THE FISCAL YEAR 1888—1889.

TABLE

SHOWING ORES RECEIVED AND WORKED FROM
MAY 1st, 1888, TO APRIL 30th, 1889, AND QUAN-
TITY ON HAND 30th APRIL, 1889.

	GRANZA.		TIERRAS.		TOTALS.	
	TONS.	PDS.	TONS.	PDS.	TONS.	PDS.
On hand 30th April, 1888...	416	1,740	1,529	145	1,945	1,885
Ores received during year...	4,751	580	24,293	1,580	29,045	160
Totals.....	5,168	320	25,822	1,725	30,991	45
Ores roasted during year...	5,008	400	23,853		28,861	400
Quantity on hand	159	1,920	1,969	1,725	2,129	1,645

TABLE

**SHOWING THE NUMBER OF TONS TRAMMED
FROM 1st MAY, 1888, TO 30th APRIL, 1889.**

Where Delivered.	Rock from Drifts, Shafts and Crosscuts.	Rock from Vein.	Ore.	Tierras.	Totals.
Randol Shaft ..	8,766 00	36,365 86	4,459 26	18,725 03	68,316 15
St. Isabel Shaft ..	6,913 50	128 70	19 50	100 95	7,162 65
St. George Shaft ..	3,903 90	539 52	236 85	602 31	5,282 58
Almaden Shaft ..	4,933 30	48 00	3 00		4,984 30
Buena Vis- ta Shaft	1,176 60				1,176 60
Prospect No. 1 ..	326 20				326 20
Prospect No. 2 ..	1,129 80				1,129 80
Prospect No. 3 ..	831 60				831 60
Day Tunnel.	3,928 80		7 88	16 68	3,953 36
Bridge Tunnel.	1,171 80				1,171 80
South St. George.	482 60				482 60
Sycamore Tunnel.	637 60				637 60
Soda Sp'ng Tunnel.	540 80				540 80
Main Tunnel.	90 00				90 00
Deep Gl'ch Tunnel.	117 60				117 60
Webster Tunnel.			5 01	15 00	20 01
Totals	34,950 10	37,082 08	4,731 50	19,459 97	96,223 65

Total Rock 72,032 18 tons.

Total Ore 24,191 47 "

Total tons 96,223 65

STATEMENT

**OF THE NUMBER OF TONS OF ORE OF ALL
QUALITIES PRODUCED FROM THE NEW ALMA-
DEN MINES FROM 1st MAY, 1888, TO 30th APRIL,
1889.**

Months.	GRANZA.		TIERRAS.		TOTALS.	
	TONS.	POUNDS.	TONS.	POUNDS.	TONS.	POUNDS.
1888.						
May	506	1320	2238	500	2744	1820
June	423	260	2448	400	2871	660
July	420	1960	2214	1640	2635	1600
August	465	1740	1570	1080	2036	820
September	336	1520	2466	1040	2803	560
October	350	1580	2583	1700	2934	1280
November	363	1880	1806	160	2170	40
December	332	1980	1499	1620	1832	1600
1889.						
January	380	1780	1710	1100	2091	880
February	369	1340	2367	1740	2737	1080
March	301	1920	1342	640	1644	560
April	497	1300	2044	1960	2542	1260
Totals	4751	580	24293	1580	29045	160

TABLE

SHOWING THE NUMBER OF TONS OF ORE SHIP-
PED TO THE HACIENDA, FROM 1st MAY, 1888,
TO 30th APRIL, 1889.

Where from	Ore.	Tierras.	Totals.
Randol Shaft.....	4,459 26	18,725 03	23,184 29
St. Isabel Shaft.....	19 50	100 95	120 45
St. George Shaft.....	236 85	602 31	839 16
Almaden Shaft.....	3 00		3 00
Old Mine.....		21 00	21 00
Upper Mine.....	50		50
Velasquez Dump.....		1,156 30	1,156 30
Old Dump.....	16 69		16 69
Buena Vista Dump....		137 35	137 35
Open Cut.....	2 60	3,053 47	3,056 07
Day Tunnel.....	6 01	16 68	22 69
Webster Tunnel.....	5 01	15 00	20 01
Santa Clara No. 1....	1 87		1 87
Santa Mariana.....		465 70	465 70
Totals.....	4,751 29	24,293 79	29,045 08

STATEMENT

OF THE NUMBER OF TONS OF ORE OF ALL
QUALITIES **Reduced** AND FLASKS OF QUICK-
SILVER **Produced** AT THE NEW ALMADEN
MINES FROM 1st MAY, 1888, TO
30th APRIL, 1889.

Months.	GRANZA.		GRANZITA AND TIERRAS.		TOTALS.		AV'E PER CT.	FLASKS QUICK- SILVER.
	TONS.	POUNDS.	TONS.	PDS.	TONS.	PDS.		
1888								
May . . .	671	1400	1,809		2,480	1,400	2,482	1,610
June . . .	462	1700	2,005		2,467	1,700	2,324	1,500
July . . .	310	700	2,427	1,000	2,737	1,700	1,536	1,100
August . .	297	1200	1,860		2,157	1,200	1,966	1,109
Septem . .	546	1900	1,666	1,000	2,213	900	2,035	1,178
October . .	443	1700	2,368	1,000	2,812	700	1,725	1,269
Novem . .	321	1500	2,448	1,000	2,770	500	1,933	1,400
Decem . .	375	1200	2,180		2,555	1,200	2,207	1,475
1889								
January . .	359	200	1,854	1,000	2,213	1,200	2,073	1,200
February .	306	600	1,487		1,793	600	1,749	820
March . .	499	100	1,698	1,000	2,197	1,100	2,245	1,290
April . . .	413	200	2,048		2,461	200	1,940	1,249
Totals . .	5008	400	23,853		28,861	400	2,014	15,200

OPERATIONS OF FURNACES

FROM 1st May, 1888, TO 30th APRIL, 1889.

Furnace No.	Time in Operation.	Class of Ore Roasted.	Quantity of Ore Roasted, Tons of 2000 lbs.		Quicksilver Produced. Flasks of 76½ lbs.	Quicksilver in Pounds.	Per ct. Yield.
	Days.		Tons.	Lbs.			
Con'ous 1	236	Granzita	7,770	1,000	2,462	1,883 43	1,157
“ “		Granza	366				
“ 2	147	Granzita	2,474	1,000	835	638 77½	1,218
“ “		Granza	148	1,000			
“ 3	255	Tierras	3,787		2,005	1,533 82	872
“ 8	206	Tierras	4,821		1,340	1,025 10	1,063
“ 7	212	Granza	2,020	1,800	3,781	2,892 46	7,156
“ 9	261	Granza	2,472	1,600	4,777	3,654 40	7,389
Totals.	1,317		28,861	400	15,200	11,628 00	2,014

	TONS.	PDS
Ores Roasted.....	57,722,400 pounds or 28,861	400
Quicksilver Produced ...	1,162,800 “ “	581 800

Total product of the Mines on the Company's property from July, 1850, to 30th of April, 1889, 895,918 flasks or 68,537,727 pounds.

STATEMENT AND BALANCE SHEET
OF THE
QUICKSILVER MINING CO.

STATEMENT OF THE BUSINESS OF THE QUICKSILVER MINING COMPANY

For the Year Ending April 30th, 1889.

To Quicksilver (\$176,399.50) and Ore (\$42,864.55) on hand as per last yearly Report	\$219,264 05	By Balance credit Income Ac't April 30, 1888	\$2,012,320 00
Cost of Quicksilver produced and Ore mined in year from April 30th, 1888, to April 30th, 1889—		“ Sales of Quicksilver	695,207 64
“ Mine Pay Roll	284,664 27	“ Rents, etc	19,753 43
“ Hacienda Pay Roll	54,620 06	“ Interest	494 55
“ Working Supplies	104,037 74	“ Ore on hand	23,031 30
“ Sundry Expenses	23,336 80	“ Quicksilver on hand	83,480 00
“ Legal Expenses	2,637 80		
“ General Expenses	12,819 71		
“ Exchange	277 60		
“ Taxes	4,304 41		
“ Dividend 1½% on Pref'd Stock July, 1888	64,369 50		
“ “ “ “ Oct., 1888	53,641 25		
“ “ “ “ Mch., 1889	64,369 50		
“ Balance Credit Income Act. Apr. 30, '89	1,945,944 23		
	<u>2,834,286 92</u>		<u>2,834,286 92</u>

NEW YORK, April 30th, 1889,

(Dividend 1½% on Preferred Stock May 2, 1889, \$64,369 50.)

THE QUICKSILVER MINING COMPANY,

Balance Sheet.

APRIL 30th, 1889.

Dr.		Cr.	
To Real Estate and Mining Property,		Capital Stock, Preferred	\$4,291,300 00
Houses and Lands, Furnaces, Machinery, Tools, etc., etc.	\$11,660,563 63	“ Common	5,708,700 00 \$10,000,000 00
“ Cash—		Income	1,945,944 23
“ Mechanics' Bank	\$68,799 67		
“ Bank of California	71,321 08		
“ Materials and Supplies	140,120 75		
“ Ore	38,748 55		
“ Quicksilver	23,031 30		
	83,480 00		
	<u>\$11,945,944 23</u>		<u>\$11,945,944 23</u>



